



# NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

PERMITTEE: PDR Properties, Inc.  
Post Office Box 8131  
Lexington, Kentucky 40533

FACILITY LOCATION: Redstone Arsenal Central WWTP (3.3 MGD)  
8007 Buxton Road  
Redstone Arsenal, Alabama 35898  
Madison County

PERMIT NUMBER: AL0062863

RECEIVING WATERS: Tennessee River  
Unnamed Tributary to Tennessee River (storm water only)

*In accordance with and subject to the provisions of the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§1251-1378 (the "FWPCA"), the Alabama Water Pollution Control Act, as amended, Code of Alabama 1975, §§ 22-22-1 to 22-22-14 (the "AWPCA"), the Alabama Environmental Management Act, as amended, Code of Alabama 1975, §§22-22A-1 to 22-22A-15, and rules and regulations adopted thereunder, and subject further to the terms and conditions set forth in this permit, the Permittee is hereby authorized to discharge into the above-named receiving waters.*

ISSUANCE DATE:

EFFECTIVE DATE:

EXPIRATION DATE:

## Draft

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Alabama Department of Environmental Management

**MUNICIPAL SECTION  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
PERMIT**

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## PART I DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS

### DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

1. Outfall 0011 Discharge Limits

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to discharge from Outfall 0011, which is described more fully in the Permittee's application. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge Limitations*							Monitoring Requirements**			
	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Daily Minimum	Daily Maximum	Percent Removal	(1) Sample Location	(2) Sample Type	(3) Measurement Frequency	(4) Seasonal
pH 00400 I 0 0	*****	*****	*****	*****	6.0 S.U.	9.0 S.U.	*****	E	GRAB	D	*****
Solids, Total Suspended 00530 I 0 0	825 lbs/day	1238 lbs/day	30.0 mg/l	45.0 mg/l	*****	*****	*****	E	COMP24	D	*****
Solids, Total Suspended 00530 G 0 0	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	I	COMP24	D	*****
Nitrogen, Ammonia Total (As N) 00610 I 0 0	550 lbs/day	825 lbs/day	20.0 mg/l	30.0 mg/l	*****	*****	*****	E	COMP24	D	*****
Nitrogen, Kjeldahl Total 00625 I 0 0	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	E	COMP24	G	*****
Nitrite Plus Nitrate Total (As N) 00630 I 0 0	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	E	COMP24	G	*****
Phosphorus, Total 00665 I 0 0	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	E	COMP24	G	*****
Flow, In Conduit or Thru Treatment Plant 50050 I 0 0	REPORT MGD	*****	*****	*****	*****	REPORT MGD	*****	E	CONTIN	A	*****
Chlorine, Total Residual (5) 50060 I 0 0	*****	*****	*****	*****	*****	1.0 mg/l	*****	E	GRAB	D	*****
E. Coli 51040 I 0 0	*****	*****	126 col/100mL	*****	*****	487 col/100mL	*****	E	GRAB	D	ECS
E. Coli 51040 I 0 0	*****	*****	548 col/100mL	*****	*****	2507 col/100mL	*****	E	GRAB	D	ECW
BOD, Carbonaceous 05 Day, 20C 80082 I 0 0	688 lbs/day	1032 lbs/day	25.0 mg/l	37.5 mg/l	*****	*****	*****	E	COMP24	D	*****
BOD, Carbonaceous 05 Day, 20C 80082 G 0 0	REPORT lbs/day	REPORT lbs/day	REPORT mg/l	REPORT mg/l	*****	*****	*****	I	COMP24	D	*****
BOD, Carb-5 Day, 20 Deg C, Percent Remvl 80091 K 0 0	*****	*****	*****	*****	*****	*****	85.0%	K	CALCTD	G	*****
Solids, Suspended Percent Removal 81011 K 0 0	*****	*****	*****	*****	*****	*****	85.0%	K	CALCTD	G	*****

\* See Part II.C.1. (Bypass); Part II.C.2. (Upset)

\*\* Monitoring Requirements

**(1) Sample Location**

- I - Influent
- E - Effluent
- X - End Chlorine Contact Chamber
- K - Percent Removal of the Monthly Avg. Influent Concentration from the Monthly Avg. Effluent Concentration.
- RS - Receiving Stream

**(2) Sample Type:**

- CONTIN - Continuous
- INSTAN - Instantaneous
- COMP-8 - 8-Hour Composite
- COMP24 - 24-Hour Composite
- GRAB - Grab
- CALCTD - Calculated

**(3) Measurement Frequency:** See also Part I.B.2.

- A - 7 days per week
- B - 5 days per week
- C - 3 days per week
- D - 2 days per week
- E - 1 day per week
- F - 2 days per month
- G - 1 day per month
- H - 1 day per quarter
- J - Annual
- Q - For Effluent Toxicity Testing, see Provision IV.B.

**(4) Seasonal Limits:**

- S = Summer (May - November)
- W = Winter (December - April)
- ECS = E. coli Summer (June - September)
- ECW = E. coli Winter (October - May)

(5) See Part IV.C. for Total Residual Chlorine (TRC). Monitoring for TRC is applicable if chlorine is utilized for disinfection purposes. If monitoring is not applicable during the monitoring period, enter "NODI=9" on the monthly DMR.

2. Outfall 001T Discharge Limits

This is an administrative outfall designation. Outfall 001T is the same physical outfall as Outfall 0011. Discharge from this outfall shall be limited and monitored by the Permittee as specified below:

<u>Parameter</u>	<u>Discharge Limitations*</u>							<u>Monitoring Requirements**</u>			
	<u>Monthly Average</u>	<u>Weekly Average</u>	<u>Monthly Average</u>	<u>Weekly Average</u>	<u>Daily Minimum</u>	<u>Daily Maximum</u>	<u>Percent Removal</u>	<u>(1) Sample Location</u>	<u>(2) Sample Type</u>	<u>(3) Measurement Frequency</u>	<u>(4) Seasonal</u>
Toxicity, Ceriodaphnia Acute 61425 1 0 0	*****	Pass = 0 Fail = 1	*****	*****	*****	*****	*****	E	COMP24	Q	*****
Toxicity, Pimephales Acute 61427 1 0 0	*****	Pass = 0 Fail = 1	*****	*****	*****	*****	*****	E	COMP24	Q	*****

\* See Part II.C.1. (Bypass); Part II.C.2. (Upset)

\*\* Monitoring Requirements

(1) Sample Location

I – Influent  
E – Effluent  
X – End Chlorine Contact Chamber  
K - Percent Removal of the Monthly Avg. Influent Concentration from the Monthly Avg. Effluent Concentration.  
RS - Receiving Stream

(2) Sample Type:

CONTIN - Continuous  
INSTAN - Instantaneous  
COMP-8 - 8-Hour Composite  
COMP24 - 24-Hour Composite  
GRAB – Grab  
CALCTD - Calculated

(3) Measurement Frequency: See also Part I.B.2.

A - 7 days per week  
B - 5 days per week  
C - 3 days per week  
D - 2 days per week  
E - 1 day per week  
F - 2 days per month  
G - 1 day per month  
H - 1 day per quarter  
J - Annual  
Q - For Effluent Toxicity Testing, see Provision IV.B.

(4) Seasonal Limits:

S = Summer (May – November)  
W = Winter (December - April)  
ECS = E. coli Summer (June – September)  
ECW = E. coli Winter (October – May)

3. Storm Water Outfalls 002S, 003S, and Outfall 004S Discharge Limits^

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to discharge from Outfall 002S, 003S, and 004S, which are described in the application as storm water outfalls located at the Permittee's wastewater treatment plant. Discharge limitations and monitoring requirements shall apply as follows:

Parameter	Discharge Limitations*							Monitoring Requirements**			
	Monthly Average	Weekly Average	Monthly Average	Weekly Average	Daily Minimum	Daily Maximum	Percent Removal	(1) Sample Location	(2)(6) Sample Type	(3) Measurement Frequency	(4) Seasonal
pH 00400 1 0 0	*****	*****	*****	*****	REPORT S.U.	REPORT S.U.	*****	E	GRAB	J	*****
Solids, Total Suspended 00530 1 0 0	*****	*****	*****	*****	*****	REPORT mg/l	*****	E	GRAB	J	*****
Oil & Grease 00556 1 0 0	*****	*****	*****	*****	*****	15 mg/l	*****	E	GRAB	J	*****
Nitrogen, Ammonia Total (As N) 00610 1 0 0	*****	*****	*****	*****	*****	REPORT mg/l	*****	E	GRAB	J	*****
Nitrogen, Kjeldahl Total 00625 1 0 0	*****	*****	*****	*****	*****	REPORT mg/l	*****	E	GRAB	J	*****
Nitrite Plus Nitrate Total (As N) 00630 1 0 0	*****	*****	*****	*****	*****	REPORT mg/l	*****	E	GRAB	J	*****
Phosphorus, Total 00665 1 0 0	*****	*****	*****	*****	*****	REPORT mg/l	*****	E	GRAB	J	*****
Flow, In Conduit or Thru Treatment Plant 50050 1 0 0	*****	*****	*****	*****	*****	REPORT MGD	*****	E	CALCTD	J	*****
Chlorine, Total Residual (5) 50060 1 0 0	*****	*****	*****	*****	*****	REPORT mg/l	*****	E	GRAB	J	*****
E. Coli 51040 1 0 0	*****	*****	*****	*****	*****	REPORT col/100mL	*****	E	GRAB	J	*****
BOD, Carbonaceous 05 Day, 20C 80082 1 0 0	*****	*****	*****	*****	*****	REPORT mg/l	*****	E	GRAB	J	*****

\* See Part II.C.1. (Bypass); Part II.C.2. (Upset)

\*\* Monitoring Requirements

(1) Sample Location

- I – Influent
- E – Effluent
- X – End Chlorine Contact Chamber
- K - Percent Removal of the Monthly Avg. Influent Concentration from the Monthly Avg. Effluent Concentration.
- RS - Receiving Stream

(2) Sample Type:

- CONTIN - Continuous
- INSTAN - Instantaneous
- COMP-8 - 8-Hour Composite
- COMP24 - 24-Hour Composite
- GRAB – Grab
- CALCTD - Calculated

(3) Measurement Frequency: See also Part I.B.2.

- A - 7 days per week
- B - 5 days per week
- C - 3 days per week
- D - 2 days per week
- E - 1 day per week
- F - 2 days per month
- G - 1 day per month
- H - 1 day per quarter
- J - Annual
- Q - For Effluent Toxicity Testing, see Provision IV.B.

(4) Seasonal Limits:

- S = Summer (May – November)
- W = Winter (December - April)
- ECS = E. coli Summer (June – September)
- ECW = E. coli Winter (October – May)

(5) See Part IV.C. for Total Residual Chlorine (TRC). Monitoring for TRC is applicable if chlorine is utilized for disinfection purposes. If monitoring is not applicable during the monitoring period, enter "NODI=9" on the monthly DMR.

(6) See Part IV.F.3 for storm water monitoring requirements.

^ Storm water sampling and reporting for all outfalls may be accomplished by sampling the following designated outfall: Outfall 002S (representative of Outfalls 003S and 004S).

## B. DISCHARGE MONITORING AND RECORD KEEPING REQUIREMENTS

### 1. Representative Sampling

Sample collection and measurement actions shall be representative of the volume and nature of the monitored discharge and shall be in accordance with the provisions of this permit. The effluent sampling point shall be at the nearest accessible location just prior to discharge and after final treatment, unless otherwise specified in the permit.

### 2. Measurement Frequency

Measurement frequency requirements found in Provision I.A. shall mean:

- a. Seven days per week shall mean daily.
- b. Five days per week shall mean any five days of discharge during a calendar weekly period of Sunday through Saturday.
- c. Three days per week shall mean any three days of discharge during a calendar week.
- d. Two days per week shall mean any two days of discharge during a calendar week.
- e. One day per week shall mean any day of discharge during a calendar week.
- f. Two days per month shall mean any two days of discharge during the month that are no less than seven days apart. However, if discharges occur only during one seven-day period in a month, then two days per month shall mean any two days of discharge during that seven day period.
- g. One day per month shall mean any day of discharge during the calendar month.
- h. Quarterly shall mean any day of discharge during each calendar quarter.
- i. The Permittee may increase the frequency of sampling, listed in Provisions I.B.2.a through I.B.2.h; however, all sampling results are to be reported to the Department.

### 3. Test Procedures

For the purpose of reporting and compliance, Permittees shall use one of the following procedures:

- a. For parameters with an EPA established Minimum Level (ML), report the measured value if the analytical result is at or above the ML and report "0" for values below the ML. Test procedures for the analysis of pollutants shall conform to 40 CFR Part 136 and guidelines published pursuant to Section 304(h) of the FWPCA, 33 U.S.C. Section 1314(h). If more than one method for analysis of a substance is approved for use, a method having a minimum level lower than the permit limit shall be used. If the minimum level of all methods is higher than the permit limit, the method having the lowest minimum level shall be used and a report of less than the minimum level shall be reported as zero and will constitute compliance, however should EPA approve a method with a lower minimum level during the term of this permit the Permittee shall use the newly approved method.
- b. For pollutants parameters without an established ML, an interim ML may be utilized. The interim ML shall be calculated as 3.18 times the Method Detection Level (MDL) calculated pursuant to 40 CFR Part 136, Appendix B.  
  
Permittees may develop an effluent matrix-specific ML, where an effluent matrix prevents attainment of the established ML. However, a matrix specific ML shall be based upon proper laboratory method and technique. Matrix-specific MLs must be approved by the Department, and may be developed by the Permittee during permit issuance, reissuance, modification, or during compliance schedule.  
  
In either case the measured value should be reported if the analytical result is at or above the ML and "0" reported for values below the ML.
- c. For parameters without an EPA established ML, interim ML, or matrix-specific ML, a report of less than the detection limit shall constitute compliance if the detection limit of all analytical methods is higher than the permit limit. For the purpose of calculating a monthly average, "0" shall be used for values reported less than the detection limit.

The Minimum Level utilized for procedures a and b above shall be reported on the Permittee's DMR. When an EPA approved test procedure for analysis of a pollutant does not exist, the Director shall approve the procedure to be used.

### 4. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the Permittee shall record the following information:

- a. The facility name and location, point source number, date, time and exact place of sampling;

- b. The name(s) of person(s) who obtained the samples or measurements;
  - c. The dates and times the analyses were performed;
  - d. The name(s) of the person(s) who performed the analyses;
  - e. The analytical techniques or methods used, including source of method and method number; and
  - f. The results of all required analyses.
5. Records Retention and Production
- a. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the above reports or the application for this permit, for a period of at least three years from the date of the sample measurement, report or application. This period may be extended by request of the Director at any time. If litigation or other enforcement action, under the AWPCA and/or the FWPCA, is ongoing which involves any of the above records, the records shall be kept until the litigation is resolved. Upon the written request of the Director or his designee, the Permittee shall provide the Director with a copy of any record required to be retained by this paragraph. Copies of these records should not be submitted unless requested.
  - b. All records required to be kept for a period of three years shall be kept at the permitted facility or an alternate location approved by the Department in writing and shall be available for inspection.
6. Reduction, Suspension or Termination of Monitoring and/or Reporting
- a. The Director may, with respect to any point source identified in Provision I.A. of this permit, authorize the Permittee to reduce, suspend or terminate the monitoring and/or reporting required by this permit upon the submission of a written request for such reduction, suspension or termination by the Permittee, supported by sufficient data which demonstrates to the satisfaction of the Director that the discharge from such point source will continuously meet the discharge limitations specified in Provision I.A. of this permit.
  - b. It remains the responsibility of the Permittee to comply with the monitoring and reporting requirements of this permit until written authorization to reduce, suspend or terminate such monitoring and/or reporting is received by the Permittee from the Director.
7. Monitoring Equipment and Instrumentation
- All equipment and instrumentation used to determine compliance with the requirements of this permit shall be installed, maintained, and calibrated in accordance with the manufacturer's instructions or, in the absence of manufacturer's instructions, in accordance with accepted practices. At a minimum, flow measurement devices shall be calibrated at least once every 12 months.

### C. DISCHARGE REPORTING REQUIREMENTS

1. Reporting of Monitoring Requirements
  - a. The Permittee shall conduct the required monitoring in accordance with the following schedule:
    - (1) **MONITORING REQUIRED MORE FREQUENTLY THAN MONTHLY AND MONTHLY** shall be conducted during the first full month following the effective date of coverage under this permit and every month thereafter.
    - (2) **QUARTERLY MONITORING** shall be conducted at least once during each calendar quarter. Calendar quarters are the periods of January through March, April through June, July through September, and October through December. The Permittee shall conduct the quarterly monitoring during the first complete calendar quarter following the effective date of this permit and is then required to monitor once during each quarter thereafter. Quarterly monitoring should be reported on the last DMR due for the quarter (i.e., March, June, September and December DMRs).
    - (3) **SEMIANNUAL MONITORING** shall be conducted at least once during the period of January through June and at least once during the period of July through December. The Permittee shall conduct the semiannual monitoring during the first complete calendar semiannual period following the effective date of this permit and is then required to monitor once during each semiannual period thereafter. Semiannual monitoring may be done anytime during the semiannual period, unless restricted elsewhere in this permit, but it should be reported on the last DMR due for the month of the semiannual period (i.e., June and December DMRs).
    - (4) **ANNUAL MONITORING** shall be conducted at least once during the period of January through December. The Permittee shall conduct the annual monitoring during the first complete calendar annual period following the effective date of this permit and is then required to monitor once during each annual period thereafter.

Annual monitoring may be done anytime during the year, unless restricted elsewhere in this permit, but it should be reported on the December DMR.

- b. The Permittee shall submit discharge monitoring reports (DMRs) on the forms approved by the Department and in accordance with the following schedule:
- (1) **REPORTS OF MORE FREQUENTLY THAN MONTHLY AND MONTHLY TESTING** shall be submitted on a monthly basis. The first report is due on the 28th day of the month following the month the permit becomes effective. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.
  - (2) **REPORTS OF QUARTERLY TESTING** shall be submitted on a quarterly basis. The first report is due on the 28th day of the month following the month the permit becomes effective. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.
  - (3) **REPORTS OF SEMIANNUAL TESTING** shall be submitted on a semiannual basis. The reports are due on the 28th day of JANUARY and the 28th day of JULY. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.
  - (4) **REPORTS OF ANNUAL TESTING** shall be submitted on an annual basis. Unless specified elsewhere in the permit, the first report is due on the 28th day of JANUARY. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.
- c. The Department is utilizing a web-based electronic environmental (E2) DMR reporting system for submittal of DMRs. **If the permittee is not already participating in the E2 DMR system, the permittee must apply for participation in the system within 180 days of coverage under this permit unless the facility submits in writing valid justification as to why they cannot participate and the Department approves in writing utilization of hard copy DMR submittals.** Once the permittee is enrolled in the E2 DMR system, the permittee must utilize the system for the submittal of DMRs unless otherwise allowed by this permit. To participate in the E2 DMR system, the Permittee Participation Package may be downloaded online at <https://e2.adem.alabama.gov/npdes>. If the E2 DMR system is down (i.e., electronic submittal of DMR data is unable to be completed due to technical problems originating with the Department's system: this could include entry/submittal issues with an entire set of DMRs or individual parameters), the permittee is not relieved of their obligation to submit DMR data to the Department by the required submittal date. However, if the E2 DMR system is down on the 28<sup>th</sup> day of the month or is down for an extended period of time as determined by the Department when a DMR is required to be submitted, the facility may submit the data in an alternate manner and format acceptable to the Department. Preapproved alternate acceptable methods include faxing, e-mailing, mailing, or hand-delivery of data such that they are received by the required reporting date. Within five calendar days of the E2 DMR system resuming operation, the permittee shall enter the data into the E2 DMR system, unless an alternate timeframe is approved by the Department. An attachment should be included with the E2 DMR submittal verifying the original submittal date (date of the fax, copy of dated e-mail, or hand-delivery stamped date). If a permittee is allowed to submit via the US Postal Service, the DMR must be legible and bear an original signature. Photo and electronic copies of the signature are not acceptable and shall not satisfy the reporting requirements of this permit. If the permittee, using approved analytical methods as specified in Provision I.B.2, monitors any discharge from a point source for a limited substance identified in Provision I.A of this permit more frequently than required by this permit, the results of such monitoring shall be included in the calculation and reporting of values on the DMR form and the increased frequency shall be indicated on the DMR form. In the event no discharge from a point source identified in Provision I.A of this permit and described more fully in the permittee's application occurs during a monitoring period, the permittee shall report "No Discharge" for such period on the appropriate DMR form.
- d. All reports and forms required to be submitted by this permit, the AWPCA and the Department's Rules and regulations, shall be electronically signed (or, if allowed by the Department, traditionally signed) by a "responsible official" of the permittee as defined in ADEM Administrative Code Rule 335-6-6-.09 or a "duly authorized representative" of such official as defined in ADEM Administrative Code Rule 335-6-6-.09 and shall bear the following certification:
- "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."**
- e. The Permittee may certify in writing that a discharge will not occur for an extended period of time and after such certification shall not be required to submit monitoring reports. Written notification of a planned resumption of discharge shall be submitted at least 30 days prior to resumption of the discharge. If an unplanned resumption of

discharge occurs, written notification shall be submitted within 7 days of the resumption. In any case, all discharges shall comply with all provisions of this permit.

- f. All reports and forms required to be submitted by this permit, the AWPCA and the Department's Rules, shall be addressed to:

**Alabama Department of Environmental Management  
Municipal Section, Water Division  
Post Office Box 301463  
Montgomery, Alabama 36130-1463**

Certified and Registered Mail shall be addressed to:

**Alabama Department of Environmental Management  
Municipal Section, Water Division  
1400 Coliseum Boulevard  
Montgomery, Alabama 36110-2059**

DMRs required to be submitted by this permit shall be addressed to:

**Alabama Department of Environmental Management  
Environmental Data Section, Permits & Services Division  
Post Office Box 301463  
Montgomery, Alabama 36130-1463**

- g. If this permit is a reissuance, then the permittee shall continue to submit DMRs in accordance with the requirements of their previous permit until such time as DMRs are due as discussed in Part I.C.1.b. above.

2. Noncompliance Notification

- a. The Permittee must notify the Department if, for any reason, the Permittee's discharge:

- (1) Does not comply with any daily minimum or maximum discharge limitation for an effluent characteristic specified in Provision I. A. of this permit which is denoted by an "(X)"
- (2) Potentially threatens human health or welfare,
- (3) Threatens fish or aquatic life
- (4) Causes an in-stream water quality criterion to be exceeded;
- (5) Does not comply with an applicable toxic pollutant effluent standard or prohibition established under Section 307(a) of the FWPCA, 33 U.S.C. Section 1317(a);
- (6) Contains a quantity of a hazardous substance that may be harmful to public health or welfare under Section 311(b)(4) of the FWPCA, 33 U.S.C. Section 1321(b)(4);
- (7) Exceeds any discharge limitation for an effluent parameter listed in Part I.A as a result of an unanticipated bypass or upset; or
- (8) Is an unpermitted direct or indirect discharge of a pollutant to a water of the state (Note that unpermitted discharges properly reported to the Department under any other requirement are not required to be reported under this provision)

The Permittee shall orally or electronically report any of the above occurrences, describing the circumstances and potential effects, to the Department within 24-hours after the Permittee becomes aware of the occurrence of such discharge. In addition to the oral or electronic report, the Permittee shall submit a written report to the Director or Designee, as provided in Provision I.C.2.c, no later than five days after becoming aware of the occurrence of such discharge or occurrence.

- b. If for any reason, the Permittee's discharge does not comply with any limitation of this permit, then the Permittee must submit a written report to the Director or Designee, as provided in Provision I.C.2.c below. This report must be submitted with the next Discharge Monitoring Report required to be submitted by Provision I.C.1 of this permit after becoming aware of the occurrence of such noncompliance.
- c. Form 421 must be submitted to the Director or Designee in accordance with Provisions I.C.2a. or b. The completed form must document the following information:
- (1) A description of the discharge and cause of noncompliance;
  - (2) The period of noncompliance, including exact dates, times, and duration of the noncompliance. If not corrected by the due date of the written report, then the Permittee is to state the anticipated timeframe that is expected to transpire before the noncompliance is resolved; and

(3) A description of the steps taken by the Permittee and the steps planned to be taken by the Permittee to reduce or eliminate the noncompliant discharge, including all steps taken to prevent recurrence.

d. Immediate notification

The permittee shall provide notification to the Director, the public, the county health department, and any other affected entity such as public water systems, as soon as possible upon becoming aware of any notifiable sanitary sewer overflow. The Permittee shall also report notification of the noncompliance event to any other affected entity such as the public.

e. The Permittee shall report SSO and other illicit or anomalous discharge events on Form 415 in accordance with Part I.C.2.a. This form is available on the ADEM web page or upon request from the Permittee.

**D. OTHER REPORTING AND NOTIFICATION REQUIREMENTS**

1. Anticipated Noncompliance

The Permittee shall give the Director written advance notice of any planned changes or other circumstances regarding a facility which may result in noncompliance with permit requirements.

2. Termination of Discharge

The Permittee shall notify the Director, in writing, when all discharges from any point source(s) identified in Provision I. A. of this permit have permanently ceased. This notification shall serve as sufficient cause for instituting procedures for modification or termination of the permit.

3. Updating Information

a. The Permittee shall inform the Director of any change in the Permittee's mailing address or telephone number or in the Permittee's designation of a facility contact or office having the authority and responsibility to prevent and abate violations of the AWPCA, the Department's Rules and the terms and conditions of this permit, in writing, no later than ten (10) days after such change. Upon request of the Director or his designee, the Permittee shall furnish the Director with an update of any information provided in the permit application.

b. If the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information with a written explanation for the mistake and/or omission.

4. Duty to Provide Information

The Permittee shall furnish to the Director, within a reasonable time, any information which the Director or his designee may request to determine whether cause exists for modifying, revoking and re-issuing, suspending, or terminating this permit, in whole or in part, or to determine compliance with this permit.

**E. SCHEDULE OF COMPLIANCE**

1. Compliance with discharge limits

The Permittee shall achieve compliance with the discharge limitations specified in Provision I. A. in accordance with the following schedule:

**COMPLIANCE SHALL BE ATTAINED ON THE EFFECTIVE DATE OF THIS PERMIT**

2. Schedule

No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

## **PART II OTHER REQUIREMENTS, RESPONSIBILITIES, AND DUTIES**

### **A. OPERATIONAL AND MANAGEMENT REQUIREMENTS**

#### **1. Facilities Operation and Maintenance**

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of the permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities only when necessary to achieve compliance with the conditions of the permit.

#### **2. Best Management Practices (BMP)**

- a. Dilution water shall not be added to achieve compliance with discharge limitations except when the Director or his designee has granted prior written authorization for dilution to meet water quality requirements.
- b. The Permittee shall prepare, implement, and maintain a Spill Prevention, Control and Countermeasures (SPCC) Plan in accordance with 40 C.F.R. Section 112 if required thereby.
- c. The Permittee shall prepare, submit for approval and implement a BMP Plan for containment of any or all process liquids or solids, in a manner such that these materials do not present a significant potential for discharge, if so required by the Director or his designee. When submitted and approved, the BMP Plan shall become a part of this permit and all requirements of the BMP Plan shall become requirements of this permit.

#### **3. Certified Operator**

The Permittee shall not operate any wastewater treatment plant unless the competency of the operator to operate such plant has been duly certified by the Director pursuant to AWPCA, and meets the requirements specified in ADEM Administrative Code, Rule 335-10-1.

### **B. OTHER RESPONSIBILITIES**

#### **1. Duty to Mitigate Adverse Impacts**

The Permittee shall promptly take all reasonable steps to mitigate and minimize or prevent any adverse impact on human health or the environment resulting from noncompliance with any discharge limitation specified in Provision I. A. of this permit, including such accelerated or additional monitoring of the discharge and/or the receiving waterbody as necessary to determine the nature and impact of the noncomplying discharge.

#### **2. Right of Entry and Inspection**

The Permittee shall allow the Director, or an authorized representative, upon the presentation of proper credentials and other documents as may be required by law to:

- (1) Enter upon the Permittee's premises where a regulated facility or activity or point source is located or conducted, or where records must be kept under the conditions of the permit;
- (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permits;
- (3) Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under the permit; and
- (4) Sample or monitor, for the purposes of assuring permit compliance or as otherwise authorized by the AWPCA, any substances or parameters at any location.

### **C. BYPASS AND UPSET**

#### **1. Bypass**

- a. Any bypass is prohibited except as provided in b. and c. below:
- b. A bypass is not prohibited if:
  - (1) It does not cause any discharge limitation specified in Provision I. A. of this permit to be exceeded;
  - (2) It enters the same receiving stream as the permitted outfall; and
  - (3) It is necessary for essential maintenance of a treatment or control facility or system to assure efficient operation of such facility or system.
- c. A bypass is not prohibited and need not meet the discharge limitations specified in Provision I. A. of this permit if:
  - (1) It is unavoidable to prevent loss of life, personal injury, or severe property damage;

- (2) There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime (this condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance); and
  - (3) The Permittee submits a written request for authorization to bypass to the Director at least ten (10) days prior to the anticipated bypass (if possible), the Permittee is granted such authorization, and the Permittee complies with any conditions imposed by the Director to minimize any adverse impact on human health or the environment resulting from the bypass.
- d. The Permittee has the burden of establishing that each of the conditions of Provision II. C. 1. b. or c. have been met to qualify for an exception to the general prohibition against bypassing contained in a. and an exemption, where applicable, from the discharge limitations specified in Provision I. A. of this permit.
2. Upset
- a. A discharge which results from an upset need not meet the discharge limitations specified in Provision I. A. of this permit if:
    - (1) No later than 24-hours after becoming aware of the occurrence of the upset, the Permittee orally reports the occurrence and circumstances of the upset to the Director or his designee; and
    - (2) No later than five (5) days after becoming aware of the occurrence of the upset, the Permittee furnishes the Director with evidence, including properly signed, contemporaneous operating logs, or other relevant evidence, demonstrating that:
      - (i) An upset occurred;
      - (ii) The Permittee can identify the specific cause(s) of the upset;
      - (iii) The Permittee's facility was being properly operated at the time of the upset; and
      - (iv) The Permittee promptly took all reasonable steps to minimize any adverse impact on human health or the environment resulting from the upset.
  - b. The Permittee has the burden of establishing that each of the conditions of Provision II C. 2. a. of this permit have been met to qualify for an exemption from the discharge limitations specified in Provision I. A. of this permit.

#### **D. DUTY TO COMPLY WITH PERMIT, RULES, AND STATUTES**

1. Duty to Comply
  - a. The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the AWPCA and the FWPCA and is grounds for enforcement action, for permit termination, revocation and reissuance, suspension, modification, or denial of a permit renewal application.
  - b. The necessity to halt or reduce production or other activities in order to maintain compliance with the conditions of the permit shall not be a defense for a Permittee in an enforcement action.
  - c. The discharge of a pollutant from a source not specifically identified in the permit application for this permit and not specifically included in the description of an outfall in this permit is not authorized and shall constitute noncompliance with this permit.
  - d. The Permittee shall take all reasonable steps, including cessation of production or other activities, to minimize or prevent any violation of this permit or to minimize or prevent any adverse impact of any permit violation.
  - e. Nothing in this permit shall be construed to preclude or negate the Permittee's responsibility to apply for, obtain, or comply with other Federal, State, or Local Government permits, certifications, or licenses or to preclude from obtaining other federal, state, or local approvals, including those applicable to other ADEM programs and regulations.
2. Removed Substances

Solids, sludges, filter backwash, or any other pollutant or other waste removed in the course of treatment or control of wastewaters shall be disposed of in a manner that complies with all applicable Department Rules.
3. Loss or Failure of Treatment Facilities

Upon the loss or failure of any treatment facilities, including but not limited to the loss or failure of the primary source of power of the treatment facility, the Permittee shall, where necessary to maintain compliance with the discharge limitations specified in Provision I. A. of this permit, or any other terms or conditions of this permit, cease, reduce, or otherwise control production and/or all discharges until treatment is restored. If control of discharge during loss or failure of the

primary source of power is to be accomplished by means of alternate power sources, standby generators, or retention of inadequately treated effluent, the Permittee must furnish to the Director within six months a certification that such control mechanisms have been installed.

4. Compliance With Statutes and Rules
  - a. This permit has been issued under ADEM Administrative Code, Chapter 335-6-6. All provisions of this chapter, that are applicable to this permit, are hereby made a part of this permit. A copy of this chapter may be obtained for a small charge from the Office of General Counsel, Alabama Department of Environmental Management, 1400 Coliseum Boulevard Montgomery, Alabama 36110-2059.
  - b. This permit does not authorize the noncompliance with or violation of any Laws of the State of Alabama or the United States of America or any regulations or rules implementing such laws. FWPCA, 33 U.S.C. Section 1319, and Code of Alabama 1975, Section 22-22-14.

#### **E. PERMIT TRANSFER, MODIFICATION, SUSPENSION, REVOCATION, AND REISSUANCE**

1. Duty to Reapply or Notify of Intent to Cease Discharge
  - a. If the Permittee intends to continue to discharge beyond the expiration date of this permit, the Permittee shall file a complete permit application for reissuance of this permit at least 180 days prior to its expiration. If the Permittee does not intend to continue discharge beyond the expiration of this permit, the Permittee shall submit written notification of this intent which shall be signed by an individual meeting the signatory requirements for a permit application as set forth in ADEM Administrative Code Rule 335-6-6-.09.
  - b. Failure of the Permittee to apply for reissuance at least 180 days prior to permit expiration will void the automatic continuation of the expiring permit provided by ADEM Administrative Code Rule 335-6-6-.06 and should the permit not be reissued for any reason any discharge after expiration of this permit will be an unpermitted discharge.

2. Change in Discharge

Prior to any facility expansion, process modification or any significant change in the method of operation of the Permittee's treatment works, the Permittee shall provide the Director with information concerning the planned expansion, modification or change. The Permittee shall apply for a permit modification at least 180 days prior to any facility expansion, process modification, any significant change in the method of operation of the Permittee's treatment works or other actions that could result in the discharge of additional pollutants or increase the quantity of a discharged pollutant or could result in an additional discharge point. This condition applies to pollutants that are or that are not subject to discharge limitations in this permit. No new or increased discharge may begin until the Director has authorized it by issuance of a permit modification or a reissued permit.

3. Transfer of Permit

This permit may not be transferred or the name of the Permittee changed without notice to the Director and subsequent modification or revocation and reissuance of the permit to identify the new Permittee and to incorporate any other changes as may be required under the FWPCA or AWPCA. In the case of a change in name, ownership or control of the Permittee's premises only, a request for permit modification in a format acceptable to the Director is required at least 30 days prior to the change. In the case of a change in name, ownership or control of the Permittee's premises accompanied by a change or proposed change in effluent characteristics, a complete permit application is required to be submitted to the Director at least 180 days prior to the change. Whenever the Director is notified of a change in name, ownership or control, he may decide not to modify the existing permit and require the submission of a new permit application.

4. Permit Modification and Revocation

- a. This permit may be modified or revoked and reissued, in whole or in part, during its term for cause, including but not limited to, the following:
  - (1) If cause for termination under Provision II. E. 5. of this permit exists, the Director may choose to revoke and reissue this permit instead of terminating the permit;
  - (2) If a request to transfer this permit has been received, the Director may decide to revoke and reissue or to modify the permit; or
  - (3) If modification or revocation and reissuance is requested by the Permittee and cause exists, the Director may grant the request.
- b. This permit may be modified during its term for cause, including but not limited to, the following:
  - (1) If cause for termination under Provision II. E. 5. of this permit exists, the Director may choose to modify this permit instead of terminating this permit;

- (2) There are material and substantial alterations or additions to the facility or activity generating wastewater which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit;
- (3) The Director has received new information that was not available at the time of permit issuance and that would have justified the application of different permit conditions at the time of issuance;
- (4) A new or revised requirement(s) of any applicable standard or limitation is promulgated under Sections 301(b)(2)(C), (D), (E), and (F), and 307(a)(2) of the FWPCA;
- (5) Errors in calculation of discharge limitations or typographical or clerical errors were made;
- (6) To the extent allowed by ADEM Administrative Code, Rule 335-6-6-.17, when the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued;
- (7) To the extent allowed by ADEM Administrative Code, Rule 335-6-6-.17, permits may be modified to change compliance schedules;
- (8) To agree with a granted variance under 301(c), 301(g), 301(h), 301(k), or 316(a) of the FWPCA or for fundamentally different factors;
- (9) To incorporate an applicable 307(a) FWPCA toxic effluent standard or prohibition;
- (10) When required by the reopener conditions in this permit;
- (11) When required under 40 CFR 403.8(e) (compliance schedule for development of pretreatment program);
- (12) Upon failure of the state to notify, as required by Section 402(b)(3) of the FWPCA, another state whose waters may be affected by a discharge permitted by this permit;
- (13) When required to correct technical mistakes, such as errors in calculation, or mistaken interpretations of law made in determining permit conditions; or
- (14) When requested by the Permittee and the Director determines that the modification has cause and will not result in a violation of federal or state law, regulations or rules.

#### 5. Termination

This permit may be terminated during its term for cause, including but not limited to, the following:

- a. Violation of any term or condition of this permit;
- b. The Permittee's misrepresentation or failure to disclose fully all relevant facts in the permit application or during the permit issuance process or the Permittee's misrepresentation of any relevant facts at any time;
- c. Materially false or inaccurate statements or information in the permit application or the permit;
- d. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge;
- e. The Permittee's discharge threatens human life or welfare or the maintenance of water quality standards;
- f. Permanent closure of the facility generating the wastewater permitted to be discharged by this permit or permanent cessation of wastewater discharge;
- g. New or revised requirements of any applicable standard or limitation that is promulgated under Sections 301(b)(2)(C), (D), (E), and (F), and 307(a)(2) of the FWPCA that the Director determines cannot be complied with by the Permittee; or
- h. Any other cause allowed by the ADEM Administrative Code, Chapter 335-6-6.

#### 6. Suspension

This permit may be suspended during its term for noncompliance until the Permittee has taken action(s) necessary to achieve compliance.

#### 7. Stay

The filing of a request by the Permittee for modification, suspension or revocation of this permit, in whole or in part, does not stay any permit term or condition.

**F. COMPLIANCE WITH TOXIC POLLUTANT STANDARD OR PROHIBITION**

If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the FWPCA, 33 U.S.C. Section 1317(a), for a toxic pollutant discharged by the Permittee, and such standard or prohibition is more stringent than any discharge limitation on the pollutant specified in Provision I. A. of this permit or controls a pollutant not limited in Provision I. A. of this permit, this permit shall be modified to conform to the toxic pollutant effluent standard or prohibition, and the Permittee shall be notified of such modification. If this permit has not been modified to conform to the toxic pollutant effluent standard or prohibition before the effective date of such standard or prohibition, the Permittee shall attain compliance with the requirements of the standard or prohibition within the time period required by the standard or prohibition and shall continue to comply with the standard or prohibition until this permit is modified or reissued.

**G. NOTICE TO DIRECTOR OF INDUSTRIAL USERS**

1. The Permittee shall not allow the introduction of wastewater, other than domestic wastewater, from a new direct discharger prior to approval and permitting, if applicable, of the discharge by the Department.
2. The Permittee shall not allow an existing indirect discharger to increase the quantity or change the character of its wastewater, other than domestic wastewater, prior to approval and permitting, if applicable, of the increased discharge by the Department.
3. The Permittee shall report to the Department any adverse impact caused or believed to be caused by an indirect discharger on the treatment process, quality of discharged water, or quality of sludge. Such report shall be submitted within seven days of the Permittee becoming aware of the adverse impacts.

**H. PROHIBITIONS**

The Permittee shall not allow, and shall take effective enforcement action to prevent and terminate, the introduction of any of the following into its treatment works by industrial users:

1. Pollutants which create a fire or explosion hazard in the treatment works;
2. Pollutants which will cause corrosive structural damage to the treatment works, or dischargers with a pH lower than 5.0 s.u., unless the works are specifically designed to accommodate such discharges;
3. Solid or viscous pollutants in amounts which will cause obstruction of flow in sewers, or other interference with the treatment works;
4. Pollutants, including oxygen demanding pollutants, released in a discharge of such volume or strength as to cause interference in the treatment works;
5. Heat in amounts which will inhibit biological activity in the treatment plant resulting in interference or in such quantities that the temperature of the treatment plant influent exceeds 40°C (104° F) unless the treatment plant is designed to accommodate such heat; and
6. Pollutants in amounts which exceed any applicable pretreatment standard under Section 307 of FWPCA or any approved revisions thereof.

## **PART III ADDITIONAL REQUIREMENTS, CONDITIONS, AND LIMITATIONS**

### **A. CIVIL AND CRIMINAL LIABILITY**

#### **1. Tampering**

Any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained or performed under the permit shall, upon conviction, be subject to penalties as provided by the AWPCA.

#### **2. False Statements**

Any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be subject to penalties as provided by the AWPCA.

#### **3. Permit Enforcement**

a. Any NPDES permit issued or reissued by the Department is a permit for the purpose of the AWPCA and the FWPCA, and as such, any terms, conditions, or limitations of the permit are enforceable under state and federal law.

b. Any person required to have a NPDES permit pursuant to ADEM Administrative Code Chapter 335-6-6 and who discharges pollutants without said permit, who violates the conditions of said permit, who discharges pollutants in a manner not authorized by the permit, or who violates applicable orders of the Department or any applicable rule or standard of the Department, is subject to any one or combination of the following enforcement actions under applicable state statutes:

- (1) An administrative order requiring abatement, compliance, mitigation, cessation, clean-up, and/or penalties;
- (2) An action for damages;
- (3) An action for injunctive relief; or
- (4) An action for penalties.

c. If the Permittee is not in compliance with the conditions of an expiring or expired permit the Director may choose to do any or all of the following provided the Permittee has made a timely and complete application for reissuance of the permit:

- (1) Initiate enforcement action based upon the permit which has been continued;
- (2) Issue a notice of intent to deny the permit reissuance. If the permit is denied, the owner or operator would then be required to cease the activities authorized by the continued permit or be subject to enforcement action for operating without a permit;
- (3) Reissue the new permit with appropriate conditions; or
- (4) Take other actions authorized by these rules and AWPCA.

#### **4. Relief from Liability**

Except as provided in Provision II. C. 1. (Bypass) and Provision II. C. 2. (Upset), nothing in this permit shall be construed to relieve the Permittee of civil or criminal liability under the AWPCA or FWPCA for noncompliance with any term or condition of this permit.

### **B. OIL AND HAZARDOUS SUBSTANCE LIABILITY**

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities or penalties to which the Permittee is or may be subject under Section 311 of the FWPCA, 33 U.S.C. Section 1321.

### **C. PROPERTY AND OTHER RIGHTS**

This permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, or any infringement of federal, state, or local laws or regulations, nor does it authorize or approve the construction of any physical structures or facilities or the undertaking of any work in any waters of the state or of the United States.

### **D. AVAILABILITY OF REPORTS**

Except for data determined to be confidential under Code of Alabama 1975, Section 22-22-9(c), all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department. Effluent data shall not be considered confidential.

**E. EXPIRATION OF PERMITS FOR NEW OR INCREASED DISCHARGES**

1. If this permit was issued for a new discharger or new source, this permit shall expire eighteen months after the issuance date if construction of the facility has not begun during the eighteen-month period.
2. If this permit was issued or modified to allow the discharge of increased quantities of pollutants to accommodate the modification of an existing facility and if construction of this modification has not begun during the eighteen month period after issuance of this permit or permit modification, this permit shall be modified to reduce the quantities of pollutants allowed to be discharged to those levels that would have been allowed if the modification of the facility had not been planned.
3. Construction has begun when the owner or operator has:
  - a. Begun, or caused to begin as part of a continuous on-site construction program:
    - (1) Any placement, assembly, or installation of facilities or equipment; or
    - (2) Significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which are necessary for the placement, assembly, or installation of new source facilities or equipment; or
  - b. Entered into a binding contractual obligation for the purpose of placement, assembly, or installation of facilities or equipment which are intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under this paragraph.
4. Final plans and specifications for a waste treatment facility at a new source or new discharger, or a modification to an existing waste treatment facility must be submitted to and examined by the Department prior to initiating construction of such treatment facility by the Permittee.
5. Upon completion of construction of waste treatment facilities and prior to operation of such facilities, the Permittee shall submit to the Department a certification from a registered professional engineer, licensed to practice in the State of Alabama, that the treatment facilities have been built according to plans and specifications submitted to and examined by the Department.

**F. COMPLIANCE WITH WATER QUALITY STANDARDS**

1. On the basis of the Permittee's application, plans, or other available information, the Department has determined that compliance with the terms and conditions of this permit should assure compliance with the applicable water quality standards.
2. Compliance with permit terms and conditions notwithstanding, if the Permittee's discharge(s) from point sources identified in Provision I. A. of this permit cause or contribute to a condition in contravention of state water quality standards, the Department may require abatement action to be taken by the Permittee in emergency situations or modify the permit pursuant to the Department's Rules, or both.
3. If the Department determines, on the basis of a notice provided pursuant to this permit or any investigation, inspection or sampling, that a modification of this permit is necessary to assure maintenance of water quality standards or compliance with other provisions of the AWPCA or FWPCA, the Department may require such modification, and, in cases of emergency, the Director may prohibit the discharge until the permit has been modified.

**G. GROUNDWATER**

Unless specifically authorized under this permit, this permit does not authorize the discharge of pollutants to groundwater. Should a threat of groundwater contamination occur, the Director may require groundwater monitoring to properly assess the degree of the problem, and the Director may require that the Permittee undertake measures to abate any such discharge and/or contamination.

**H. DEFINITIONS**

1. Average monthly discharge limitation – means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month (zero discharge days shall not be included in the number of "daily discharges" measured and a less than detectable test result shall be treated as a concentration of zero if the most sensitive EPA approved method was used).
2. Average weekly discharge limitation - means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week (zero discharge days shall not be included in the number of "daily discharges" measured and a less than detectable test result shall be treated as a concentration of zero if the most sensitive EPA approved method was used).

- c. Which has never received a final effective NPDES permit for dischargers at that site.
29. NH<sub>3</sub>-N – means the pollutant parameter ammonia, measured as nitrogen.
30. Notifiable sanitary sewer overflow – means an overflow, spill, release or diversion of wastewater from a sanitary sewer system that:
- Reaches a surface water of the State; or
  - May imminently and substantially endanger human health based on potential for public exposure including but not limited to close proximity to public or private water supply wells or in areas where human contact would be likely to occur.
31. Permit application – means forms and additional information that is required by ADEM Administrative Code Rule 335-6-6-.08 and applicable permit fees.
32. Point source – means "any discernible, confined and discrete conveyance, including but not limited to any pipe, channel, ditch, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, . . . from which pollutants are or may be discharged." Section 502(14) of the FWPCA, 33 U.S.C. Section 1362(14).
33. Pollutant – includes for purposes of this permit, but is not limited to, those pollutants specified in Code of Alabama 1975, Section 22-22-1(b)(3) and those effluent characteristics specified in Provision I. A. of this permit.
34. Privately Owned Treatment Works – means any devices or system which is used to treat wastes from any facility whose operator is not the operator of the treatment works, and which is not a "POTW".
35. Publicly Owned Treatment Works – means a wastewater collection and treatment facility owned by the State, municipality, regional entity composed of two or more municipalities, or another entity created by the State or local authority for the purpose of collecting and treating municipal wastewater.
36. Receiving Stream – means the "waters" receiving a "discharge" from a "point source".
37. Severe property damage – means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
38. Significant Source – means a source which discharges 0.025 MGD or more to a POTW or greater than five percent of the treatment work's capacity, or a source which is a primary industry as defined by the U.S. EPA or which discharges a priority or toxic pollutant.
39. TKN – means the pollutant parameter Total Kjeldahl Nitrogen.
40. TON – means the pollutant parameter Total Organic Nitrogen.
41. TRC – means Total Residual Chlorine.
42. TSS – means the pollutant parameter Total Suspended Solids.
43. 24HC – means 24-hour composite sample, including any of the following:
- The mixing of at least 8 equal volume samples collected at constant time intervals of not more than 2 hours over a period of 24 hours;
  - A sample collected over a consecutive 24-hour period using an automatic sampler composite to one sample. As a minimum, samples shall be collected hourly and each shall be no more than one twenty-fourth (1/24) of the total sample volume collected; or
  - A sample collected over a consecutive 24-hour period using an automatic composite sampler composited proportional to flow.
44. Upset – means an exceptional incident in which there is an unintentional and temporary noncompliance with technology-based permit discharge limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
45. Waters – means "[a]ll waters of any river, stream, watercourse, pond, lake, coastal, ground, or surface water, wholly or partially within the state, natural or artificial. This does not include waters which are entirely confined and retained completely upon the property of a single individual, partnership, or corporation unless such waters are used in interstate commerce." Code of Alabama 1975, Section 22-22-1(b)(2). Waters "include all navigable waters" as defined in Section 502(7) of the FWPCA, 22 U.S.C. Section 1362(7), which are within the State of Alabama.
46. Week – means the period beginning at twelve midnight Saturday and ending at twelve midnight the following Saturday.

47. Weekly (7-day and calendar week) Average – is the arithmetic mean of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. The calendar week is defined as beginning on Sunday and ending on Saturday. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for the calendar week shall be included in the data for the month that contains the Saturday.

**I. SEVERABILITY**

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

## **PART IV SPECIFIC REQUIREMENTS, CONDITIONS, AND LIMITATIONS**

### **A. SLUDGE MANAGEMENT PRACTICES**

1. Applicability
  - a. Provisions of Provision IV.A. apply to a sewage sludge generated or treated in treatment works that is applied to agricultural and non-agricultural land, or that is otherwise distributed, marketed, incinerated, or disposed in landfills or surface disposal sites.
  - b. Provisions of Provision IV.A. do not apply to:
    - (1) Sewage sludge generated or treated in a privately owned treatment works operated in conjunction with industrial manufacturing and processing facilities and which receive no domestic wastewater.
    - (2) Sewage sludge that is stored in surface impoundments located at the treatment works prior to ultimate disposal.
2. Submitting Information
  - a. If applicable, the Permittee must submit annually with its Municipal Water Pollution Prevention (MWPP) report the following:
    - (1) Type of sludge stabilization/digestion method;
    - (2) Daily or annual sludge production (dry weight basis);
    - (3) Ultimate sludge disposal practice(s).
  - b. The Permittee shall provide sludge inventory data to the Director as requested. These data may include, but are not limited to, sludge quantity and quality reported in Provision IV.A.2.a as well as other specific analyses required to comply with State and Federal laws regarding solid and hazardous waste disposal.
  - c. The Permittee shall give prior notice to the Director of at least 30 days of any change planned in the Permittee's sludge disposal practices.
3. Reopener or Modification
  - a. Upon review of information provided by the Permittee as required by Provision IV.A.2. or, based on the results of an on-site inspection, the permit shall be subject to modification to incorporate appropriate requirements.
  - b. If an applicable "acceptable management practice" or if a numerical limitation for a pollutant in sewage sludge promulgated under Section 405 of FWPCA is more stringent than the sludge pollutant limit or acceptable management practice in this permit. This permit shall be modified or revoked or reissued to conform to requirements promulgated under Section 405. The Permittee shall comply with the limitations no later than the compliance deadline specified in applicable regulations as required by Section 405 of FWPCA.

### **B. EFFLUENT TOXICITY LIMITATIONS AND BIOMONITORING REQUIREMENTS – ACUTE DIFFUSER**

1. Acute Toxicity Test
  - a. The permittee shall perform 48-hour acute toxicity tests on the wastewater discharges required to be tested for acute toxicity by Part I of this permit.
  - b. The samples shall be diluted using an appropriate control water, to the Instream Waste Concentration (IWC) which is **15 percent** effluent. The IWC is the actual concentration of effluent, after mixing, in the receiving stream during a 1-day, 10-year flow period.
  - c. Any test where survival in the effluent concentration is less than 90% and statistically lower than the control indicates acute toxicity and constitutes noncompliance with this permit.
2. General Test Requirements:
  - a. A 24-hour composite sample shall be obtained for use in above biomonitoring tests. The holding time for each sample shall not exceed 36 hours. The control water shall be a water prepared in the laboratory in accordance with the EPA procedure described in EPA 821-R-02-012 or most current edition or another control water selected by the permittee and approved by the Department.
  - b. Effluent toxicity tests in which the control survival is less than 90% or in which the other requirements of the EPA Test Procedure are not met shall be unacceptable and the permittee shall rerun the tests as soon as practical within the monitoring period.
  - c. In the event of an invalid test, upon subsequent completion of a valid test, the results of all tests, valid and invalid, are reported with an explanation of the tests performed and results.

- d. Toxicity tests shall be conducted for the duration of this permit in the month of **October**. Should results from the Annual Toxicity test indicate that Outfall 0011 exhibits acute toxicity, then the Permittee must conduct the follow-up testing described in Part IV.B.4.a. In addition, the Permittee may then also be required to conduct toxicity testing in the months of January, April, July, and October.
3. Reporting Requirements:
- a. The permittee shall notify the Department in writing within 48 hours after toxicity has been demonstrated by the scheduled test(s).
- b. Biomonitoring test results obtained during each monitoring period shall be summarized and reported using the appropriate Discharge Monitoring Report (DMR) form approved by the Department. In accordance with Section 2 of this part, an effluent toxicity report containing the information in Section 2 and 7 shall be included with the DMR. Two copies of the test results must be submitted to the Department no later than 28 days after the month in which the tests were performed.
4. Additional Testing Requirements:
- a. If acute toxicity is indicated (noncompliance with permit limit), the permittee shall perform four additional valid acute toxicity tests in accordance with these procedures to determine the extent and duration of the toxic condition. The toxicity tests shall be performed once per week and shall be performed during the first four calendar weeks following the date on which the permittee became aware of the permit noncompliance and the results of these tests shall be submitted no later than 28 days following the month in which the tests were performed.
- b. After evaluation of the results of the follow-up tests, the Department will determine if additional action is appropriate and may require additional testing and/or toxicity reduction measures. The permittee may be required to perform a Toxicity Identification Evaluation (TIE) and/or a Toxicity Reduction Evaluation (TRE). The TIE/TRE shall be performed in accordance with the most recent protocols/guidance outlined by EPA (e.g., EPA/600/2-88/062, EPA/600/R-92/080, EPA/600/R-92/081, EPA/833/B-99/022 and/or EPA/600/6-91/005F, etc.).
5. Test Methods:

The tests shall be performed in accordance with the latest edition of the "EPA Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms" and shall be performed using the fathead minnow (*Pimephales promelas*) and the cladoceran (*Ceriodaphnia dubia*).

6. Effluent Toxicity Testing Reports

The following information shall be submitted with each discharge monitoring report unless otherwise directed by the Department. The Department may at any time suspend or reinstate this requirement or may increase or decrease the frequency of submittals.

- a. Introduction
- (1) Facility Name, location and county
  - (2) Permit number
  - (3) Toxicity testing requirements of permit
  - (4) Name of receiving water body
  - (5) Contract laboratory information (if tests are performed under contract)
    - (a) Name of firm
    - (b) Telephone number
    - (c) Address
  - (6) Objective of test
- b. Plant Operations
- (1) Discharge operating schedule (if other than continuous)
  - (2) Volume of discharge during sample collection to include Mean daily discharge on sample collection date (MGD, CFS, GPM)
  - (3) Design flow of treatment facility at time of sampling
- c. Source of Effluent and Dilution Water
- (1) Effluent samples
    - (a) Sampling point
    - (b) Sample collection dates and times (to include composite sample start and finish times)
    - (c) Sample collection method
    - (d) Physical and chemical data of undiluted effluent samples (water temperature, pH, alkalinity, hardness, specific conductance, total residual chlorine (if applicable), etc.)
    - (e) Sample temperature when received at the laboratory

- (f) Lapsed time from sample collection to delivery
- (g) Lapsed time from sample collection to test initiation
- (2) Dilution Water Samples
  - (a) Source
  - (b) Collection date(s) and time(s) (where applicable)
  - (c) Pretreatment
  - (d) Physical and chemical characteristics (pH, hardness, water temperature, alkalinity, specific conductance, etc.)
- d. Test Conditions
  - (1) Toxicity test method utilized
  - (2) End point(s) of test
  - (3) Deviations from referenced method, if any, and reason(s)
  - (4) Date and time test started
  - (5) Date and time test terminated
  - (6) Type and volume of test chambers
  - (7) Volume of solution per chamber
  - (8) Number of organisms per test chamber
  - (9) Number of replicate test chambers per treatment
  - (10) Test temperature, pH and dissolved oxygen as recommended by the method (to include ranges)
  - (11) Feeding frequency, and amount and type of food
  - (12) Light intensity (mean)
- e. Test Organisms
  - (1) Scientific name
  - (2) Life stage and age
  - (3) Source
  - (4) Disease treatment (if applicable)
- f. Quality Assurance
  - (1) Reference toxicant utilized and source
  - (2) Date and time of most recent acute reference toxicant test(s), raw data, and current cusum chart(s)
  - (3) Dilution water utilized in reference toxicant test
  - (4) Results of reference toxicant test(s) (LC50, etc.), report concentration-response relationship and evaluate test sensitivity. The most recent reference toxicant test shall be conducted within 30-days of the routine.
  - (5) Physical and chemical methods utilized
- g. Results
  - (1) Provide raw toxicity data in tabular form, including daily records of affected organisms in each concentration (including controls) and replicate
  - (2) Provide table of endpoints: LC50, NOEC, Pass/Fail (as required in the applicable NPDES permit)
  - (3) Indicate statistical methods used to calculate endpoints
  - (4) Provide all physical and chemical data required by method
  - (5) Results of test(s) (LC50, NOEC, Pass/Fail, etc.), report concentration-response relationship (definitive test only), report percent minimum significant difference (PMSD).
- h. Conclusions and Recommendations
  - (1) Relationship between test endpoints and permit limits
  - (2) Action to be taken

1/ Adapted from "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms", Fifth Edition, October 2002 (EPA 821-R-02-012), Section 12, Report Preparation

### C. TOTAL RESIDUAL CHLORINE (TRC) REQUIREMENTS

1. If chlorine is not utilized for disinfection purposes, TRC monitoring under Part I of this Permit is not required. If TRC monitoring is not required, "NODI = 9" (conditional monitoring) should be reported on the DMR forms.
2. Testing for TRC shall be conducted according to either the amperometric titration method or the DPD colorimetric method as specified in Section 408(C) or (E), Standards Methods for the Examination of Water and Wastewater, 18th edition. If chlorine is not detected prior to actual discharge to the receiving stream using one of these methods (i.e., the analytical result is less than the detection level), the Permittee shall report on the DMR form "NODI = B" or "0". The Permittee shall then be considered to be in compliance with the daily maximum concentration limit for TRC.

3. This permit contains a maximum allowable TRC level in the effluent. The Permittee is responsible for determining the minimum TRC level needed in the chlorine contact chamber to comply with E.coli limits. The effluent shall be dechlorinated if necessary to meet the maximum allowable effluent TRC level.
4. The sample collection point for effluent TRC shall be at a point downstream of the chlorine contact chamber (downstream of dechlorination if applicable). The exact location is to be approved by the Director.

#### **D. PLANT CLASSIFICATION**

The Permittee shall report to the Director within 30 days of the effective date of this permit, the name, address and operator number of the certified wastewater operator in responsible charge of the facility. Unless specified elsewhere in this permit, this facility shall be classified in accordance with ADEM Admin. Code R. 335-10-1-.03.

#### **E. POLLUTANT SCANS**

The Permittee shall sample and analyze for the pollutants listed in 40 CFR 122 Appendix J Table 2. The Permittee shall provide data from a minimum of three samples collected within the four and one half years prior to submitting a permit application. Samples must be representative of the seasonal variation in the discharge from each outfall.

#### **F. STORM WATER REQUIREMENTS**

##### **1. Prohibitions**

- a. The Permittee shall not allow the discharge of non-storm water into permitted storm water outfall(s) unless said discharge is already subject to an NPDES permit.
- b. Pollutants removed in the course of treatment or control shall be disposed in a manner that complies with all applicable Department rules and regulations.

##### **2. Operational and Management Practices**

The permittee shall prepare and implement a Storm Water Pollution Prevention (SWPP) Plan within one year of the effective date of this permit.

##### **a. In the SWPP Plan, the Permittee shall:**

- (1) Assess the treatment plant site by developing and presenting site drainage maps, materials inventory, and best management operational practices. The plan shall also include a description of all spill or leak sources;
- (2) Describe mechanisms and procedures to prevent the contact of sewage sludge, screenings, raw or partially treated wastewater, or any other waste product or pollutant with storm water discharged from the facility;
- (3) Provide for daily inspection on workdays of any structures that function to prevent storm water pollution or that remove pollutants from storm water;
- (4) Provide for daily inspection of the facility in general to ensure that the SWPP Plan is continually implemented and effective;
- (5) Include a Best Management Practices (BMP) Plan that, as a minimum, addresses housekeeping, preventative maintenance, spill prevention and response, and non-storm water discharges;
- (6) Describe mechanisms and procedures to provide sediment control sufficient to prevent or control storm water pollution storm water by particles resulting from soil or sediment migration from the site due to significant clearing, grading, or excavation activities;
- (7) Designate by position or name the person or persons responsible for the day to day implementation of the SWPP Plan; and
- (8) Bear the signature of an individual meeting signatory requirements as defined in ADEM Administrative Code, Rule 335-6-6-.09.

- b. The Director or his designee may notify the permittee at any time that the SWPP Plan is deficient and will require correction of the deficiency. The permittee shall correct any SWPP Plan deficiency identified by the Director or his designee within 30 days of receipt of notification and shall certify to the Department that the correction has been made and implemented.

##### **c. Administrative Procedures**

- (1) A copy of the SWPP Plan shall be maintained at the facility and shall be available for inspection by the Department.

- (2) A log of daily inspections required by Provision IV.F.2.a.(3.) of the permit shall be maintained at the facility and shall be made available for inspection by the Department upon request. The log shall contain records of all inspections performed and each daily entry shall be signed by the person performing the inspection.
- (3) The Permittee shall provide training for any personnel required to implement the SWPP Plan and shall retain documentation of such training at the facility. Training records for all personnel shall be available for inspection by the Department. Training shall be performed prior to the date implementation is required.

3. Monitoring Requirements

- a. Storm water discharged through each storm water outfall shall be sampled once per calendar year, using first flush grab samples (FFGS) collected during the first 30 minutes of discharge.
- b. The total volume of storm water discharged for the event must be monitored, including the date and duration (in hours) and rainfall (in inches) for the storm event(s) sampled. The duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event must be a minimum of 72 hours. This information must be recorded as part of the sampling procedure and records retained in accordance with Provision I.B.5. of this permit. The volume may be measured using flow measurement devices or may be estimated using any method approved in writing by the Department.

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 WATER DIVISION – INDUSTRIAL AND MUNICIPAL SECTIONS  
**NONCOMPLIANCE NOTIFICATION FORM**

PERMITTEE NAME: \_\_\_\_\_ PERMIT NO: \_\_\_\_\_  
 FACILITY LOCATION: \_\_\_\_\_  
 DMR REPORTING PERIOD: \_\_\_\_\_

1. DESCRIPTION OF DISCHARGE: (Include outfall number (s))
  
2. DESCRIPTION OF NON-COMPLIANCE: (Attach additional pages if necessary):

<b>LIST EFFLUENT VIOLATIONS (If applicable)</b>			
Outfall Number (s)	NONCOMPLIANCE PARAMETER(S)	Result Reported (Include units)	Permit Limit (Include units)
<b>LIST MONITORING / REPORTING VIOLATIONS (If applicable)</b>			
Outfall Number (s)	NONCOMPLIANCE PARAMETER(S)	Monitoring / Reporting Violation (Provide description)	

3. CAUSE OF NON-COMPLIANCE (Attach additional pages if necessary):
  
4. PERIOD OF NONCOMPLIANCE: (Include exact date(s) and time(s) or, if not corrected, the anticipated time the noncompliance is expected to continue):
  
5. DESCRIPTION OF STEPS TAKEN AND/OR BEING TAKEN TO REDUCE OR ELIMINATE THE NONCOMPLYING DISCHARGE AND TO PREVENT ITS RECURRENCE (attach additional pages if necessary):

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

\_\_\_\_\_  
 NAME AND TITLE OF RESPONSIBLE OFFICIAL (type or print)

/

\_\_\_\_\_  
 SIGNATURE OF RESPONSIBLE OFFICIAL / DATE SIGNED



Alabama Department of Environmental Management  
adem.alabama.gov

1400 Coliseum Blvd. 36110-2400 ■ Post Office Box 301463  
Montgomery, Alabama 36130-1463  
(334) 271-7700 ■ FAX (334) 271-7950

**FACT SHEET**

**APPLICATION FOR  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM  
PERMIT TO DISCHARGE TREATED WASTEWATERS  
TO WATERS OF THE STATE OF ALABAMA**

**Date: April 2, 2015**

**Prepared By: Stephanie Ammons**

**NPDES Permit No. AL0062863**

**1. SYNOPSIS OF APPLICATION**

**a. Name and Address of Applicant and Location if Different From Mailing Address**

Applicant Name and Address:

PDR Properties, Inc.  
Post Office Box 8131  
Lexington, Kentucky 40533

Facility Location:

Redstone Arsenal Central WWTP  
8007 Buxton Road  
Redstone Arsenal, Alabama 35898

**b. Description of Applicant's Facility or Activity Generating the Discharge**

Municipal Wastewater Treatment Plant

For the Outfall latitude and longitude see the permit application

**c. Applicant's Receiving Waters**

Receiving Waters

Tennessee River  
UT to Tennessee River (storm water only)

Classification

Public Water Supply/ Fish and Wildlife  
Fish and Wildlife

**d. Quantitative Description of Proposed Discharges**

See attached draft permit and permit application

**2. PROPOSED DISCHARGE LIMITATIONS**

See attached draft permit

**3. STATEMENT OF BASIS FOR PERMIT LIMITATIONS**

See attached permit rationale



#### 4. PROCEDURES FOR THE FORMULATION OF FINAL DETERMINATIONS

##### a. Comment Period

The Alabama Department of Environmental Management proposes to issue an NPDES permit to this applicant subject to the effluent limitations and special conditions outlined above. These determinations are tentative.

Interested persons are invited to submit written comments on the permit application or on proposed determinations to the following address:

Russell A. Kelly, Chief  
Permits and Services Division  
Alabama Department of Environmental Management  
1400 Coliseum Blvd  
(Mailing Address: Post Office Box 301463; Zip 36130-1463)  
Montgomery, Alabama 36110-2059  
(334) 271-7714

All comments received prior to the closure of the public notice period (see attached public notice) will be considered in the formulation of final determinations with regard to this application.

##### b. Public Hearing

A written request for a public hearing may also be filed with the public notice period and must state the nature of the issues proposed to be raised in the hearing. The Director shall hold a public hearing whenever it is found, on the basis of hearing requests, that there exists a significant degree of public interest in the permit application or draft permit or group of permits. A request for a hearing should be filed with the Department at the following address:

Russell A. Kelly, Chief  
Permits and Services Division  
Alabama Department of Environmental Management  
1400 Coliseum Blvd  
(Mailing Address: Post Office Box 301463; Zip 36130-1463)  
Montgomery, Alabama 36110-2059  
(334) 271-7714

The Director may hold a public hearing if he determines that useful information and data may be obtained thereby. Public notice of such a hearing will be published at least 30 days prior to the hearing in a newspaper having general circulation in the geographical area of the discharge and will be sent to those on the ADEM mailing list at least thirty days prior to the hearing.

##### c. Issuance of the Permit

Upon the expiration of the comment period and, if applicable, completion of the public hearing process a response to all significant comments will be prepared. After consideration of all comments received during the notice period or as the result of a public hearing, the response to comments, and of the requirements of the Alabama Water Pollution Control Act and appropriate regulations, the Director will make a final decision regarding permit issuance. **The permit record, including the response to comments, will be available to the public and an appointment to review the record may be made by writing the Permits and Services Division at the above address.**

Unless a request for a stay of a permit or permit provision is granted, the proposed permit contained in the Director's determination shall be issued and effective; and will be the final action of the Alabama Department of Environmental Management.

##### d. Appeal Procedures

Any person adversely affected by the Director's final decision may submit an appeal or a request for a stay of the permit or one or more provisions of the permit. Such requests should be received by the

Environmental Management Commission within thirty days of issuance of the permit. Requests should be submitted to the Chairperson at the following address:

Alabama Environmental Management Commission  
1400 Coliseum Blvd  
(Mailing Address: Post Office Box 301463; Zip 36130-1463)  
Montgomery, Alabama 36110-2059

All requests must:

- (i) State the name, mailing address and telephone number of the person making such request;
- (ii) Identify the interest of the appellant which is affected by the proposed issuance, denial or modification of the permit contained in the determination of the Director, and explain how and to what extent that interest would be directly and adversely affected by such determination;
- (iii) Identify any persons whom the request represents;
- (iv) State with particularity the issues proposed to be considered at the hearing;
- (v) Include any terms and conditions with which the appellant proposes to revise or replace the determinations of the Director;
- (vi) State the name, mailing address and telephone number of the attorney for the person making the request, if represented by an attorney; and
- (vii) An original signature of the person making the request or such person's attorney.

The Commission may rule on the appeal or may hold an appeals hearing prior to making a ruling.

## NPDES PERMIT RATIONALE

NPDES Permit No: **AL0062863** Date: May 8, 2015  
Revision: August 5, 2015

Permit Applicant: PDR Properties, Inc.  
Post Office Box 8131  
Lexington, Kentucky 40533

Location: Redstone Arsenal Central WWTP  
8007 Buxton Road  
Redstone Arsenal, Alabama 35898

Draft Permit is: Initial Issuance:  
Reissuance due to expiration: X  
Modification of existing permit:  
Revocation and Reissuance:

Basis for Limitations: Water Quality Model: NH3-N, CBOD5  
Reissuance with no modification: pH, TSS, NH3-N, TRC, CBOD5, TSS%  
Removal CBOD5% Removal  
Instream calculation at 7Q10: 15.03% (based on CORMIX model)  
Toxicity based: TRC  
Secondary Treatment Levels: TSS, NH3-N, CBOD5, TSS% Removal  
CBOD5% Removal  
Other (described below): pH, E.coli

Major: Yes

Design Flow in Million Gallons per Day: 3.3 MGD

Description of Discharge: Outfall Number 0011;  
The effluent discharge is to the Tennessee River which is classified as Public Water Supply and Fish and Wildlife.  
  
Outfall Numbers 002S, 003S, and 004S;  
The storm water discharges are to an unnamed tributary to the Tennessee River which is classified as Fish and Wildlife.

Discussion: This is a permit reissuance due to expiration. Limits for Five Day Carbonaceous Biochemical Oxygen Demand (CBOD5) and Total Ammonia as Nitrogen (NH3-N) were developed based on a Waste Load Allocation (WLA) model completed by ADEM's Water Quality Branch on August 5, 2014. The monthly average CBOD5 limit is 25.0 mg/L. The monthly average NH3-N limit is 20.0 mg/L.  
  
The pH limits were developed in accordance with the water-use classification of the receiving stream. The pH limits are 6.0 s.u. (daily minimum) and 9.0 s.u. (daily maximum).  
  
The Department amended ADEM Administrative Code R.335-6-10-.09 to change the bacterial indicator organisms and associated criteria for non-coastal waters from Fecal Coliform to *Escherichia coli* (E. coli) to be consistent with the United States Environmental Protection Agency (EPA) recommendations for protection against water-borne illnesses. As a result, this permit includes E. coli limits that are consistent with the revised regulations.  
  
The imposed E. coli limits were determined based on the water-use classification of the receiving stream. Since the Tennessee River is classified as Public Water Supply and Fish and Wildlife, the E.coli limits for June – September are 126 col/100mL (monthly average) and 487 col/100mL (daily maximum), while the limits for October – May are 548 col/100mL (monthly average) and 2507 col/100mL (daily maximum).

The Total Residual Chlorine (TRC) limit is based on calculations to ensure that the acute and chronic toxic concentrations of TRC in the receiving stream are not exceeded. The TRC limit is 1.0 mg/L (daily maximum). The TRC limit is provisional. If chlorine disinfection is utilized then the imposed TRC limit will apply.

The monthly average Total Suspended Solids (TSS) and TSS percent removal limits of 30.0 mg/L and 85.0 percent, respectively, are based on the requirements of 40 CFR part 133.102. The CBOD5 percent removal limit of 85.0 percent is based on the requirements of 40 CFR part 133.102 regarding Secondary Treatment.

In addition to NH<sub>3</sub>-N, the Permittee is required to monitor and report effluent test results for Total Phosphorus (TP), Total Kjeldahl Nitrogen (TKN), and Nitrite plus Nitrate-Nitrogen (NO<sub>2</sub>+NO<sub>3</sub>-N). Monitoring for these nutrient-related parameters is imposed so that sufficient information will be available regarding the nutrient contribution from this point source, should it be necessary at some later time to impose nutrient limits on this discharge.

The Department completed a reasonable potential analysis (RPA) of the discharge based on the receiving stream's historical low flows, laboratory data provided in the Permittee's application, and available background data from upstream of the point of discharge. The RPA indicates whether pollutants in treated effluent have the potential to contribute to excursions of Alabama's in-stream water quality standards. The Department used a hardness background value of 69.7 mg/L in the RPA based on data collected from Station TENR-417 in the Tennessee River. The Department also collected data for Antimony, Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Selenium, Silver, Thallium, and Zinc at Station TENR-417. The data collected was below the method detection limit for each of these parameters and therefore did not affect the RPA. Based on the RPA, it was determined that there was no reasonable potential for in-stream water quality standards to be exceeded.

The facility treats a mixture of municipal and industrial wastewater. The Permittee asserts that there are two significant industrial dischargers (i.e., two applicable SID permits) to the treatment plant.

This permit imposes toxicity testing for both survival and life-cycle impairment (i.e., growth and reproduction). Acute toxicity testing with two species (Ceriodaphnia and Pimephales) is required on an annual basis at the calculated Instream Waste Concentration (IWC) of 15 percent.

The frequency of monitoring for most parameters is two days per week. Monitoring results for nutrients are to be reported monthly. Flow is to be monitored continuously, seven days per week. TSS and CBOD5 percent removals are to be calculated monthly.

In the permit application, the Permittee reported three storm water outfalls from the treatment plant. Storm water monitoring will be required on an annual basis at Outfalls 002S, 003S and 004S.

The receiving stream is the Tennessee River. It is a Tier II stream and is not believed to be impaired due to any parameter of concern. The stream is not listed on the most recent 303(d) list, and there are no approved Total Maximum Daily Loads (TMDLs) affecting this discharge.

ADEM Administrative Rule 335-6-10-.12 requires applicants for new or expanded discharges to Tier II waters demonstrate that the proposed discharge is necessary for important economic or social development in the area in which the waters are located. The application submitted by the facility is for a new or expanded discharge to a Tier II stream, so the applicant is required to demonstrate that the discharge is necessary for economic and social development. The review of the anti-degradation evaluation is attached.

Revision: The Permittee has asserted that storm water from Outfall 003S and Outfall 004S drains to Outfall 002S, and storm water at Outfall 002S is representative of the storm water at Outfall 003S and Outfall 004S. For purposes of sampling and reporting, Outfall 002S will be considered representative of Outfalls 003S and 004S, and sampling will only be required at Outfall 002S. Storm water monitoring at Outfall 002S will be required on an annual basis.

Prepared by: Stephanie Ammons

ID	Pollutant	Carcinogen Yes*	Type	Equation: $Q_d * C_d + Q_{d2} * C_{d2} + Q_s * C_s = Q_r * C_r$				Enter Max Daily Discharge as reported by Applicant (C <sub>max</sub> ) ug/d	Enter Avg Daily Discharge as reported by Applicant (C <sub>avg</sub> ) ug/d	Partition Coefficient (Stream / Lake)
				Background from upstream source (C <sub>d2</sub> ) Daily Max	Background from upstream source (C <sub>d1</sub> ) Monthly Ave	Background Instream (C <sub>s</sub> ) Daily Max	Background Instream (C <sub>s</sub> ) Monthly Ave			
1	Antimony		Metals	0	0	0	0	0	-	
2	Arsenic**	YES	Metals	0	0	0	0.58	0.193	0.574	
3	Beryllium		Metals	0	0	0	0	0	-	
4	Cadmium**		Metals	0	0	0	0	0	0.236	
5	Chromium / Chromium III**		Metals	0	0	0	0	0	0.210	
6	Chromium / Chromium VI**		Metals	0	0	0	0	0	-	
7	Copper**		Metals	0	0	0	0	0	-	
8	Lead**		Metals	0	0	0	9.5	3.75	0.388	
9	Mercury**		Metals	0	0	0	0	0	0.206	
10	Nickel**		Metals	0	0	0	2.02	1.7	0.505	
11	Selenium		Metals	0	0	0	0	0	-	
12	Silver		Metals	0	0	0	0	0	-	
13	Thallium		Metals	0	0	0	0	0	-	
14	Zinc**		Metals	0	0	0	23.6	22.5	0.330	
15	Cyanide		Metals	0	0	0	7	2	-	
16	Total Phenolic Compounds		Metals	0	0	0	0	0	-	
17	Hardness (As CaCO3)		Metals	0	0	0	97500	96300	-	
18	Acrolein		VOC	0	0	0	0	0	-	
19	Acrylonitrile*	YES	VOC	0	0	0	0	0	-	
20	Aldrin	YES	VOC	0	0	0	0	0	-	
21	Benzene*	YES	VOC	0	0	0	0	0	-	
22	Bromoform*	YES	VOC	0	0	0	0	0	-	
23	Carbon Tetrachloride*	YES	VOC	0	0	0	0	0	-	
24	Chlordane	YES	VOC	0	0	0	0	0	-	
25	Chlorobenzene	YES	VOC	0	0	0	0	0	-	
26	Chlorodibromo-Methane*	YES	VOC	0	0	0	0	0	-	
27	Chloroethane	YES	VOC	0	0	0	0	0	-	
28	2-Chloro-Ethylvinyl Ether	YES	VOC	0	0	0	0	0	-	
29	Chloroform*	YES	VOC	0	0	0	0	0	-	
30	4,4'-DDD	YES	VOC	0	0	0	0	0	-	
31	4,4'-DDE	YES	VOC	0	0	0	0	0	-	
32	4,4'-DDT	YES	VOC	0	0	0	0	0	-	
33	Dichlorobromo-Methane*	YES	VOC	0	0	0	0	0	-	
34	1,1-Dichloroethane	YES	VOC	0	0	0	0	0	-	
35	1,2-Dichloroethane*	YES	VOC	0	0	0	0	0	-	
36	Trans-1,2-Dichloro-Ethylene	YES	VOC	0	0	0	0	0	-	
37	1,1-Dichloroethylene*	YES	VOC	0	0	0	0	0	-	
38	1,2-Dichloropropane	YES	VOC	0	0	0	0	0	-	
39	1,3-Dichloro-Propylene	YES	VOC	0	0	0	0	0	-	
40	Dieldrin	YES	VOC	0	0	0	0	0	-	
41	Ethylbenzene	YES	VOC	0	0	0	0	0	-	
42	Methyl Bromide	YES	VOC	0	0	0	0	0	-	
43	Methyl Chloride	YES	VOC	0	0	0	0	0	-	
44	Methylene Chloride*	YES	VOC	0	0	0	0	0	-	
45	1,1,1,2-Tetrachloro-Ethane*	YES	VOC	0	0	0	0	0	-	
46	Tetrachloro-Ethylene*	YES	VOC	0	0	0	0	0	-	
47	Toluene	YES	VOC	0	0	0	0	0	-	
48	Toxaphene	YES	VOC	0	0	0	0	0	-	
49	Tributyltine (TBT)	YES	VOC	0	0	0	0	0	-	
50	1,1,1-Trichloroethane	YES	VOC	0	0	0	0	0	-	
51	1,1,2-Trichloroethane*	YES	VOC	0	0	0	0	0	-	
52	Trichloroethylene*	YES	VOC	0	0	0	0	0	-	
53	Vinyl Chloride*	YES	VOC	0	0	0	0	0	-	
54	p-Chloro-m-Cresol	YES	Acids	0	0	0	0	0	-	
55	2-Chlorophenol	YES	Acids	0	0	0	0	0	-	
56	4-Dichlorophenol	YES	Acids	0	0	0	0	0	-	
57	2,4-Dimethylphenol	YES	Acids	0	0	0	0	0	-	
58	4,6-Dinitro-O-Cresol	YES	Acids	0	0	0	0	0	-	
59	2,4-Dinitrophenol	YES	Acids	0	0	0	0	0	-	
60	4,6-Dinitro-2-methylphenol	YES	Acids	0	0	0	0	0	-	
61	Dioxin (2,3,7,8-TCDF)	YES	Acids	0	0	0	0	0	-	
62	2-Nitrophenol	YES	Acids	0	0	0	0	0	-	
63	4-Nitrophenol	YES	Acids	0	0	0	0	0	-	
64	Pentachlorophenol*	YES	Acids	0	0	0	0	0	-	
65	Phenol	YES	Acids	0	0	0	0	0	-	
66	2,4,6-Trichlorophenol*	YES	Acids	0	0	0	0	0	-	
67	Acenaphthene	YES	Bases	0	0	0	0	0	-	
68	Acenaphthylene	YES	Bases	0	0	0	0	0	-	
69	Anthracene	YES	Bases	0	0	0	0	0	-	
70	Benidine	YES	Bases	0	0	0	0	0	-	
71	Benzo(A)Anthracene*	YES	Bases	0	0	0	0	0	-	
72	Benzo(A)Pyrene*	YES	Bases	0	0	0	0	0	-	
73	1,4-Benzo-Fluoranthene	YES	Bases	0	0	0	0	0	-	
74	Benzo(GH)Perylene	YES	Bases	0	0	0	0	0	-	
75	Benzo(K)Fluoranthene	YES	Bases	0	0	0	0	0	-	
76	Bis (2-Chloroethoxy) Methane	YES	Bases	0	0	0	0	0	-	
77	Bis (2-Chloroethyl) Ether*	YES	Bases	0	0	0	0	0	-	
78	Bis (2-Chloro-Propyl) Ether	YES	Bases	0	0	0	0	0	-	
79	Bis (2-Ethylhexyl) Phthalate*	YES	Bases	0	0	0	0	0	-	
80	4-Bromophenyl Phenyl Ether	YES	Bases	0	0	0	0	0	-	
81	Butyl Benzyl Phthalate	YES	Bases	0	0	0	0	0	-	
82	2-Chloronaphthalene	YES	Bases	0	0	0	0	0	-	
83	4-Chlorophenyl Phenyl Ether	YES	Bases	0	0	0	0	0	-	
84	Chrysene*	YES	Bases	0	0	0	0	0	-	
85	Di-n-Butyl Phthalate	YES	Bases	0	0	0	0	0	-	
86	Di-n-Octyl Phthalate	YES	Bases	0	0	0	0	0	-	
87	Dibenzo(A,H)Anthracene*	YES	Bases	0	0	0	0	0	-	
88	1,2-Dichlorobenzene	YES	Bases	0	0	0	0	0	-	
89	1,3-Dichlorobenzene	YES	Bases	0	0	0	0	0	-	
90	1,4-Dichlorobenzene	YES	Bases	0	0	0	0	0	-	
91	3,3-Dichlorobenzene*	YES	Bases	0	0	0	0	0	-	
92	Diethyl Phthalate	YES	Bases	0	0	0	0	0	-	
93	Dimethyl Phthalate	YES	Bases	0	0	0	0	0	-	
94	2,4-Dinitrotoluene*	YES	Bases	0	0	0	0	0	-	
95	2,6-Dinitrotoluene	YES	Bases	0	0	0	0	0	-	
96	1,2-Diphenylhydrazine	YES	Bases	0	0	0	0	0	-	
97	Endosulfan (alpha)	YES	Bases	0	0	0	0	0	-	
98	Endosulfan (beta)	YES	Bases	0	0	0	0	0	-	
99	Endosulfan sulfate	YES	Bases	0	0	0	0	0	-	
100	Endrin	YES	Bases	0	0	0	0	0	-	
101	Endrin Aldehyde	YES	Bases	0	0	0	0	0	-	
102	Fluoranthene	YES	Bases	0	0	0	0	0	-	
103	Fluorene	YES	Bases	0	0	0	0	0	-	
104	Heptachlor	YES	Bases	0	0	0	0	0	-	
105	Heptachlor Epoxide	YES	Bases	0	0	0	0	0	-	
106	Hexachlorobenzene*	YES	Bases	0	0	0	0	0	-	
107	Hexachlorobutadiene*	YES	Bases	0	0	0	0	0	-	
108	Hexachlorocyclohexane (epsilon)	YES	Bases	0	0	0	0	0	-	
109	Hexachlorocyclohexane (beta)	YES	Bases	0	0	0	0	0	-	
110	Hexachlorocyclohexane (gamma)	YES	Bases	0	0	0	0	0	-	
111	Hexachlorocyclopentadiene	YES	Bases	0	0	0	0	0	-	
112	Hexachloroethane	YES	Bases	0	0	0	0	0	-	
113	Indeno(1,2,3-CD)Pyrene*	YES	Bases	0	0	0	0	0	-	
114	Isophorone	YES	Bases	0	0	0	0	0	-	
115	Naphthalene	YES	Bases	0	0	0	0	0	-	
116	Nitrobenzene	YES	Bases	0	0	0	0	0	-	
117	N-Nitrosodi-N-Propylamine*	YES	Bases	0	0	0	0	0	-	
118	N-Nitrosodi-N-Methylamine*	YES	Bases	0	0	0	0	0	-	
119	N-Nitrosodi-N-Phenylamine*	YES	Bases	0	0	0	0	0	-	
120	PCB-1016	YES	Bases	0	0	0	0	0	-	
121	PCB-1221	YES	Bases	0	0	0	0	0	-	
122	PCB-1237	YES	Bases	0	0	0	0	0	-	
123	PCB-1242	YES	Bases	0	0	0	0	0	-	
124	PCB-1248	YES	Bases	0	0	0	0	0	-	
125	PCB-1254	YES	Bases	0	0	0	0	0	-	
126	PCB-1260	YES	Bases	0	0	0	0	0	-	
127	Phenanthrene	YES	Bases	0	0	0	0	0	-	
128	Pyrene	YES	Bases	0	0	0	0	0	-	
129	1,2,4-Trichlorobenzene	YES	Bases	0	0	0	0	0	-	

3.3	Enter Q <sub>d</sub> = wastewater discharge flow from facility (MGD)
5.105856	Q <sub>d</sub> = wastewater discharge flow (cfs) (this value is calculated from the MGD)
0	Enter or estimated, Q <sub>d2</sub> = background stream flow from upstream source (cfs)
6291	Enter TQ10, Q <sub>s</sub> = background stream flow in cfs above point of discharge
4718.25	Enter or estimated, 1Q10, Q <sub>s</sub> = background stream flow in cfs above point of discharge (1Q10 estimated at 75% of TQ10)
0	Enter flow from upstream discharge Q <sub>d2</sub> = background stream flow in MGD above point of discharge
41891	Enter Mean Annual Flow, Q <sub>s</sub> = background stream flow in cfs above point of discharge
11061	Enter TQ2, Q <sub>s</sub> = background stream flow in cfs above point of discharge (For LWF class streams)
Enter to Left	Enter C <sub>s</sub> = background in-stream pollutant concentration in ug/l (assuming this is zero "0" unless there is data)
Q <sub>d</sub> + Q <sub>d2</sub> + Q <sub>s</sub>	Q <sub>r</sub> = resultant in-stream flow, after discharge
Calculated	C <sub>r</sub> = resultant in-stream pollutant concentration in ug/l in the stream (after complete mixing occurs)
69.7	Enter Background Hardness above point of discharge (assumed 50 South of Birmingham and 100 North of Birmingham)
7.00 s.u.	Enter Background pH above point of discharge
YES	Enter, is discharge to a stream? "YES" Other option would be to a Lake (This changes the partition coefficients for the metals)

\*\* Using Partition Coefficients

June 5, 2015  
Modified: 8/4/09

Facility Name: Redstone Arsenal Central WWTP																								
NPDES No. AL0062863																								
Freshwater PWS classification				Freshwater Acute (µg/l) Q <sub>a</sub> = 1Q10				Freshwater Chronic (µg/l) Q <sub>a</sub> = 7Q10				Human Health Consumption Fish & Water (µg/l)			Human Health Consumption Fish only (µg/l)									
ID	Pollutant	RP?	Carcinogen yes	Background from upstream source (Cd2) Daily Max	Max Daily Discharge as reported by Applicant (C <sub>max</sub> )	Water Quality Criteria (C <sub>c</sub> )	Draft Permit Limit (C <sub>max</sub> )	20% of Draft Permit Limit	RP?	Background from upstream source (Cd2) Monthly Ave	Avg Daily Discharge as reported by Applicant (C <sub>max</sub> )	Water Quality Criteria (C <sub>c</sub> )	Draft Permit Limit (C <sub>max</sub> )	20% of Draft Permit Limit	RP?	Carcinogen Q <sub>a</sub> = Annual Average Non-Carcinogen Q <sub>a</sub> = 7Q10			Carcinogen Q <sub>a</sub> = Annual Average Non-Carcinogen Q <sub>a</sub> = 7Q10					
																Water Quality Criteria (C <sub>c</sub> )	Draft Permit Limit (C <sub>c</sub> )	20% of Draft Permit Limit	Water Quality Criteria (C <sub>c</sub> )	Draft Permit Limit (C <sub>c</sub> )	20% of Draft Permit Limit	RP?	Water Quality Criteria (C <sub>c</sub> )	Draft Permit Limit (C <sub>c</sub> )
1	Antimony			0	0					0						5.52E+00	6.80E+03	1.36E+03	No	3.73E+02	4.60E+05	9.21E+04	No	
2	Arsenic		YES	0	0.58	592.334	547.960.375	109592.075	No	0	0.193	261.324	322242.524	64448.50488	No	1.20E+01	9.89E+02	1.98E+02	No	3.03E+01	2.49E+03	4.97E+02	No	
3	Beryllium			0	0					0														
4	Cadmium			0	0	5.006	5556.411	1111.262137	No	0	0	0.811	1000.063	200.0126551	No									
5	Chromium Chromium III			0	0	2018.752	#####	373503.8478	No	0	0	262.598	323813.647	64762.72931	No									
6	Chromium Chromium VI			0	0	16.000	14801.377	2960.275344	No	0	0	11.000	13564.262	2712.852399	No									
7	Copper			0	9.6	24.851	22804.205	4560.841051	No	0	8.75	16.956	20968.178	4181.635636	No	1.30E+03	1.60E+06	3.21E+05	No	1.30E+03	1.80E+06	3.21E+05	No	
8	Lead			0	0	211.171	195351.339	39070.26771	No	0	0	8.229	10147.339	2029.46772	No									
9	Mercury			0	0	2.400	2220.207	444.0413016	No	0	0	0.012	14.797	2.959475344	No	4.19E+02	5.17E+01	1.03E+01	No	4.24E+02	5.23E+01	1.05E+01	No	
10	Nickel			0	202	683.200	632019.212	128403.8423	No	0	1.7	75.882	93571.802	18714.36038	No	4.11E+02	5.06E+05	1.01E+05	No	9.93E+02	1.22E+06	2.45E+05	No	
11	Selenium			0	0	20.000	18501.721	3700.34418	No	0	0	5.000	6165.574	1233.114727	No	1.63E+02	2.01E+05	4.03E+04	No	2.43E+03	3.00E+06	5.99E+05	No	
12	Silver			0	0	1.729	1599.414	319.8827298	No	0	0													
13	Thallium			0	0					0	0													
14	Zinc			0	23.6	261.524	241932.659	48386.35189	No	0	22.5	263.664	325127.657	65025.5314	No	6.18E+03	7.59E+06	1.52E+06	No	1.49E+04	1.84E+07	3.67E+06	No	
15	Cyanide			0	7	22.000	20351.893	4070.378598	No	0	0	5.200	6412.197	1282.439316	No	1.38E+02	1.70E+05	3.40E+04	No	9.33E+03	1.15E+07	2.30E+06	No	
16	Total Phenolic Compounds			0	0					0														
17	Hardness (As CaCO3)			0	97500					96300														
18	Azobenzene			0	0					0														
19	Acrylonitrile		YES	0	0					0														
20	Aldrin		YES	0	0	3.000	2775.258	555.051627	No	0	0	1.300	1603.049	320.6096289	No	2.90E+05	2.38E+01	4.76E+02	No	2.94E+05	2.41E+01	4.82E+02	No	
21	Benzenes		YES	0	0					0														
22	Bromoforn		YES	0	0					0														
23	Carbon Tetrachloride		YES	0	0					0														
24	Chlordane		YES	0	0	2.400	2220.207	444.0413016	No	0	0	0.004	5.302	1.060478665	No	4.71E+04	3.86E+00	7.72E+01	No	4.71E+04	3.86E+00	7.72E+01	No	
25	Chlorobenzene			0	0					0														
26	Chlorodibromo-Methane		YES	0	0					0														
27	Chloroethane			0	0					0														
28	2-Chloro-Ethylvinyl Ether			0	0					0														
29	Chloroform		YES	0	0					0														
30	4,4'- DDE		YES	0	0					0														
31	4,4'- DDE		YES	0	0					0														
32	4,4'- DDT		YES	0	0					0														
33	Dichlorobromo-Methane		YES	0	0					0														
34	1,1-Dichloroethane			0	0					0														
35	1,1,1-Dichloroethane		YES	0	0					0														
36	Trans-1,2-Dichloro-Ethylene		YES	0	0					0														
37	1,1-Dichloroethylene		YES	0	0					0														
38	1,2-Dichloropropane			0	0					0														
39	1,1,1-Dichloro-Propylene			0	0					0														
40	Dieldrin		YES	0	0	0.240	222.021	44.40413016	No	0	0	0.056	69.054	13.81088494	No	3.08E+05	2.53E+01	5.05E+02	No	3.12E+05	2.56E+01	5.12E+02	No	
41	Ethylbenzene			0	0					0														
42	Methyl Bromide			0	0					0														
43	Methyl Chloride			0	0					0														
44	Methylene Chloride		YES	0	0					0														
45	1,1,1,2-Tetrachloro-Ethane		YES	0	0					0														
46	Tetrachloro-Ethylene		YES	0	0					0														
47	Toluene			0	0					0														
48	Toxaphene		YES	0	0	0.730	675.313	135.0625628	No	0	0	0.0002	0.247	0.049324580	No	1.21E+03	1.49E+06	2.98E+05	No	8.72E+03	1.08E+07	2.15E+06	No	
49	Tributyltin (TBT)		YES	0	0	0.460	425.540	85.10791814	No	0	0	0.072	88.784	17.75685206	No	1.61E+04	1.32E+00	2.64E+01	No	1.62E+04	1.33E+00	2.66E+01	No	
50	1,1,1-Trichloroethane			0	0					0														
51	1,1,2-Trichloroethane		YES	0	0					0														
52	Trichlorobenzene		YES	0	0					0														
53	Vinyl Chloride		YES	0	0					0														
54	p-Chloro-M-Cresol			0	0					0														
55	2-Chlorophenol			0	0					0														
56	2,4-Dichlorophenol			0	0					0														
57	2,4-Dimethylphenol			0	0					0														
58	4,6-Dinitro-O-Cresol			0	0					0														
59	2,4-Dinitrophenol			0	0					0														
60	4,6-Dinitro-2-methylphenol		YES	0	0					0														
61	Dioxin (2,3,7,8-TCDD)		YES	0	0					0														
62	2-Nitrophenol			0	0					0														
63	4-Nitrophenol			0	0					0														
64	Pentachlorophenol		YES	0	0	8.723	8069.822	1613.964482	No	0	0	6.693	8252.723	1650.544699	No	2.50E+01	2.09E+03	4.11E+02	No	1.77E+00	1.45E+04	2.90E+03	No	
65	Phenol			0	0					0														
66	2,4,6-Trichlorophenol		YES	0	0					0														
67	Acenaphthene			0	0					0														
68	Acenaphthylene			0	0					0														
69	Anthracene			0	0					0														
70	Benzo(a)Anthracene		YES	0	0					0														
71	Benzo(a)Pyrene		YES	0	0					0														
72	3,4-Benzo-Fluoranthene			0	0					0														
73	Benzo(ghi)Perylene			0	0					0														
74	Benzo(k)Fluoranthene			0	0					0														
75	Benzo(k)Fluoranthene			0	0					0														
76	Bis (2-Chloroethoxy) Methane			0	0					0														
77	Bis (2-Chloroethoxy)-Ether		YES	0	0					0														
78	Bis (2-Chloro-Propyl) Ether			0	0					0														
79	Bis (2-Ethylhexyl) Phthalate		YES	0	0					0														
80	4-Bromophenyl Phenyl Ether			0	0					0														
81	Bis(2-Ethylhexyl) Phthalate																							

## TOXICITY AND DISINFECTION RATIONALE

Facility Name:	<b>Redstone Arsenal Central WWTP</b>	
NPDES Permit Number:	<b>AL0062863</b>	
Receiving Stream:	<b>Tennessee River</b>	
Facility Design Flow (Q <sub>w</sub> ):	<b>3.300 MGD</b>	
Receiving Stream 7Q <sub>10</sub> :	<b>6291.000 cfs</b>	
Receiving Stream 1Q <sub>10</sub> :	<b>4718.000 cfs</b>	
Winter Headwater Flow (WHF):	<b>11061.00 cfs</b>	
Summer Temperature for CCC:	<b>28 deg. Celsius</b>	
Winter Temperature for CCC:	<b>28 deg. Celsius</b>	
Headwater Background NH <sub>3</sub> -N Level:	<b>0.32 mg/l</b>	
Receiving Stream pH:	<b>7.0 s.u.</b>	
Headwater Background FC Level (summer):	<b>N/A.</b>	<b>(Only applicable for facilities with diffusers.)</b>
(winter)	<b>N/A.</b>	

The Stream Dilution Ratio (SDR) is calculated using the 7Q10 for all stream classifications.

$$\text{Stream Dilution Ratio (SDR)} = \frac{Q_w}{7Q_{10} + Q_w} = 0.08\%$$

### AMMONIA TOXICITY LIMITATIONS

Toxicity-based ammonia limits are calculated in accordance with the *Ammonia Toxicity Protocol* and the *General Guidance for Writing Water Quality Based Toxicity Permits*.

If the Limiting Dilution is less than 1%, the waterbody is considered stream-dominated and the CMC applies.

If the Limiting Dilution is greater than 1%, the waterbody is considered effluent-dominated and the CCC applies.

$$\begin{aligned} \text{Limiting Dilution} &= \frac{Q_w}{7Q_{10} + Q_w} \\ &= 0.08\% \quad \text{Stream-Dominated, CMC Applies} \end{aligned}$$

Criterion Maximum Concentration (CMC):	$CMC = 0.411 / (1 + 10^{(7.204 - pH)}) + 58.4 / (1 + 10^{(pH - 7.204)})$
Criterion Continuous Concentration (CCC):	$CCC = [0.0577 / (1 + 10^{(7.688 - pH)}) + 2.487 / (1 + 10^{(pH - 7.688)})] * \text{Min}[2.85, 1.45 * 10^{(0.028 * (25 - T))}]$

	<u>CMC</u>	<u>CCC</u>
Allowable Summer Instream NH <sub>3</sub> -N:	<b>36.09 mg/l</b>	<b>2.48 mg/l</b>
Allowable Winter Instream NH <sub>3</sub> -N:	<b>36.09 mg/l</b>	<b>2.48 mg/l</b>

$$\begin{aligned} \text{Summer NH}_3\text{-N Toxicity Limit} &= \frac{[(\text{Allowable Instream NH}_3\text{-N}) * (7Q_{10} + Q_w)] - [(\text{Headwater NH}_3\text{-N}) * (7Q_{10})]}{Q_w} \\ &= 44112.2 \text{ mg/l NH}_3\text{-N at 7Q}_{10} \end{aligned}$$

$$\begin{aligned} \text{Winter NH}_3\text{-N Toxicity Limit} &= \frac{[(\text{Allowable Instream NH}_3\text{-N}) * (\text{WHF} + Q_w)] - [(\text{Headwater NH}_3\text{-N}) * (\text{WHF})]}{Q_w} \\ &= \text{N/A.} \end{aligned}$$

The ammonia limits established in the permit will be the lesser of the DO-based ammonia limit (from the wasteload allocation model) or the toxicity limits calculated above.

	<u>DO-based NH<sub>3</sub>-N limit</u>	<u>Toxicity-based NH<sub>3</sub>-N limit</u>
Summer	<b>20.00 mg/l NH<sub>3</sub>-N</b>	<b>44112.20 mg/l NH<sub>3</sub>-N</b>
Winter	<b>N/A.</b>	<b>N/A.</b>

**Summer: The DO based limit of 20.00 mg/l NH<sub>3</sub>-N applies.**

**Winter limits are not applicable.**



Alabama Department of Environmental Management  
adem.alabama.gov  
1400 Coliseum Blvd. 36110-2400 ■ Post Office Box 301463  
Montgomery, Alabama 36130-1463  
(334) 271-7700 ■ FAX (334) 271-7950

Tuesday August 5, 2014

**MEMORANDUM**

TO: File  
Water Quality Branch

FROM: Ross Caton  
Water Quality Branch

RE: Redstone Arsenal Central WWTP WLA

The Water Quality Branch has completed its annual wasteload allocation (WLA) for the Redstone Arsenal Central WWTP discharge to the Tennessee River in Madison County at a flow of 3.3 MGD. The QUAL2E Water Quality Model was used to determine the discharge's impact on the waterbody. After model runs and analysis it was determined that the following limits are needed to maintain water quality standards.

PARAMETER	ANNUAL LIMIT
Flow	3.3 MGD
CBOD <sub>5</sub>	25.0 mg/L
NH <sub>3</sub> -N	20.0 mg/L
DO	0.0 mg/L

In addition, we are requesting monthly-monitoring during the growing season (April - September) for Total Phosphorus (TP), Nitrite + Nitrate (NO<sub>2</sub>+NO<sub>3</sub>), and Total Kjeldahl Nitrogen (TKN).

REC:rec

Facility: Redstone Arsenal Central WWTP  
Permit #: AL0062863  
Receiving Waterbody: *Tennessee River - Tennessee River Basin*  
County: *Madison*  
Date Completed: *8/5/2014*  
Performed by: *REC. Water Quality*



# Waste Load Allocation Summary

Comments included

Yes  No

## General Information

Information Verified By

REC

Page 1

Receiving Stream Name Tennessee River

Year File Was Created 1997

Previous File Name

OR: Local Name (If applicable)

Facility Name

Redstone Arsenal Central WWTP

Previous Discharger Name

Or-AKA (includes previous file name)

11 Digit HUC Code 06030002230

12 Digit HUC Code 060300020904

River Basin Tennessee

County Madison

Use Classification PWS / F&W

Date of WLA Response 8/5/2014

Discharge Latitude 34.58825

Lat/Long Method Arcview

Discharge Longitude -86.69041

Site Visit Completed?  Yes  No

Approved TMDL?

Yes  No

Date of Site Visit 7/17/2014

Approval Date of TMDL

Waterbody Impaired?  Yes  No

Antidegradation  Yes  No

Waterbody Tier Level Tier II

Use Support Category 1

Other Point Sources?  Yes  No

## Permit Information

Permit Number AL0062863

Permit Status Active

### Sources Included in Model

Huntsville Aldridge Creek WWTP, Huntsville Spring Branch WWTP, Huntsville West Area WWTP, Decatur Dry Creek WWTP, Ascend Performance Materials, Daikin, 3M, BP Amoco, TVA Browns Ferry, Lucy Branch WWTP, IP Courtland, Joe Wheeler State Park, Rogersville Lagoon

Type of Discharger

- Municipal  
 Industrial  
 Semipublic/Private  
 Mining

## Waste Load Allocation Information

Modeled Reach Length 76 Miles

Date of Allocation 8/5/2014

Name of Model Used QUAL2E

Allocation Type Annual

Model Completed by Ross Caton

Type of Model Used Desk-top

Allocation Developed by Water Quality Branch

# Waste Load Allocation Summary

Annual Effluent Limits	Conventional Parameters				Other Parameters			
	Qw	MGD	Qw	MGD	Qw	MGD	Qw	MGD
Season								
From								
Through								
CBOD5	25	mg/L	CBOD5	mg/L	TP	mg/L	TP	mg/L
NH3-N	20	mg/L	NH3-N	mg/L	TN	mg/L	TN	mg/L
TKN		mg/L	TKN	mg/L	TSS	mg/L	TSS	mg/L
D.O.	0	mg/L	D.O.	mg/L		mg/L		mg/L

"Monitor Only" Parameters for Effluent:		Parameter	Frequency	Parameter	Frequency
		TP	Monthly(Apr-Sept)		
		NO2+NO3-N	Monthly(Apr-Sept)		
		TKN	Monthly(Apr-Sept)		

Water Quality Characteristics Immediately Upstream of Discharge				
Parameter	Summer		Winter	
CBODu	2	mg/l		mg/l
NH3-N	0.32	mg/l		mg/l
Temperature	23	°C		°C
pH	7	su		su

Hydrology at Discharge Location				
Drainage Area Qualifier  Exact	Drainage Area	25657	sq mi	Method Used to Calculate  ADEM Estimate w/USGS Gage Data  75% of 7Q10  ADEM Estimate w/USGS Gage Data  ADEM Estimate w/USGS Gage Data
	Stream 7Q10	6291	cfs	
	Stream 1Q10	4718	cfs	
	Stream 7Q2	11061	cfs	
	Annual Average	41891	cfs	

Comments and/or Notations

If comments are made, check the "yes" box at the top of page one.

# Mixing Zone Analysis Summary

Comments included

Yes  No

## General Information

Page 1

Year File Was Started 1997

Information Verified By REC

Date of MZ Response 8/27/2014

Name of Receiving Stream Tennessee River

Previous file name: Or-AKA (If applicable)

Facility Name Redstone Arsenal Central WWTP

Previous Name of Discharger Or-AKA (If applicable)

11 Digit HUC Code USGS 06030002230

Other Point Sources?  Yes  No

12 Digit HUC Code 060300020904

Sources Included in the Model:

River Basin Tennessee

County Madison

Use Classification PWS / F&W

Discharge Latitude 34.58825

Discharge Longitude -86.69041

Site Visit Completed?  Yes  No

Date of Site Visit 7/17/2014

Print Record

Close Form

## Permit Information

Type of Discharger

Municipal  
 Industrial  
 Semipublic/Private

Permit Number AL0062863

Permit Status Active

## Hydrology

Drainage Area 25657 sq mi

Stream 7Q10 6291 cfs

Stream 1Q10 4718 cfs

Stream 7Q2 11061 cfs

## Method Used to Calculate

ADEM Estimate w/USGS Gage Data

75% of 7Q10

ADEM Estimate w/USGS Gage Data

Date of MZ Analysis 8/27/2014

Model Completed by Ross Caton

Discharge Design Flow 3.3 MGD

Seasonal?  Yes  No

## Pollutant Category

Whole Effluent Toxicity (WET)  Thermal  Pathogens

If not seasonal, only the summer sections will be used

# Mixing Zone Analysis Summary - Page 2

## WET Parameters

### Summer

#### Acute

Ambient Streamflow  cfs  
 ZID Length  Meters  
 ZID IWC  %

#### Chronic

Ambient Streamflow  cfs  
 Mixing Zone Length  Meters  
 Mixing Zone IWC  %

### Winter

#### Acute

Ambient Streamflow  cfs  
 ZID Length  Meters  
 ZID IWC  %

#### Chronic

Ambient Streamflow  cfs  
 Mixing Zone Length  Meters  
 Mixing Zone IWC  %

## Thermal Parameters

### Summer

Ambient Streamflow  cfs  
 Mixing Zone Length  Meters  
 Max. Effluent Temp  °C

### Winter

Ambient Streamflow  cfs  
 Mixing Zone Length  Meters  
 Max. Effluent Temp  °C

## Pathogen Parameters

### Summer

Ambient Streamflow  cfs  
 ZID Length  Meters  
 Max. Effluent Fecal Conc  Cols/100 mls  
 Max. Effluent Enterococci Conc (for coastal waters)  Cols/100 mls

### Winter

Ambient Streamflow  cfs  
 ZID Length  Meters  
 Max. Effluent Fecal Conc  Cols/100 mls  
 Max. Effluent Enterococci Conc (for coastal waters)  Cols/100 mls

Comments  
and/or  
Notations

If comments are made, check the "yes" box at the top of page one.

Last Revision: 8/30/06

FORM <b>1</b> GENERAL		U.S. ENVIRONMENTAL PROTECTION AGENCY <b>GENERAL INFORMATION</b> Consolidated Permits Program <i>(Read the "General Instructions" before starting.)</i>	I. EPA I.D. NUMBER AL0062863
LABEL ITEMS		PLEASE PLACE LABEL IN THIS SPACE	GENERAL INSTRUCTIONS If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent (the area to the left of the label space lists the information that should appear), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI (except VI-B which must be completed regardless). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.
I. EPA I.D. NUMBER			
III. FACILITY NAME			
V. FACILITY MAILING ADDRESS			
VI. FACILITY LOCATION			

**II. POLLUTANT CHARACTERISTICS**

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of **bold-faced terms**.

SPECIFIC QUESTIONS	Mark "X"			SPECIFIC QUESTIONS	Mark "X"		
	YES	NO	FORM ATTACHED		YES	NO	FORM ATTACHED
A. Is this facility a <b>publicly owned treatment works</b> which results in a <b>discharge to waters of the U.S.?</b> (FORM 2A)		X		B. Does or will this facility (either existing or proposed) include a <b>concentrated animal feeding operation</b> or <b>aquatic animal production facility</b> which results in a <b>discharge to waters of the U.S.?</b> (FORM 2B)		X	
C. Is this a facility which currently results in <b>discharges to waters of the U.S.</b> other than those described in A or B above? (FORM 2C)	X		X	D. Is this a proposed facility (other than those described in A or B above) which will result in a <b>discharge to waters of the U.S.?</b> (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of <b>hazardous wastes?</b> (FORM 3)		X		F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed <b>stationary source</b> which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed <b>stationary source</b> which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an <b>attainment area?</b> (FORM 5)		X	

**III. NAME OF FACILITY**

1 SKIP Redstone Arsenal Central WWTP

**IV. FACILITY CONTACT**

A. NAME & TITLE (last, first, & title)      B. PHONE (area code & no.)

2 Ray, Elbert C. President      (859) 223-0425

**V. FACILITY MAILING ADDRESS**

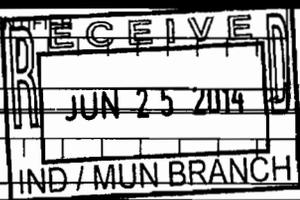
A. STREET OR P.O. BOX      B. CITY OR TOWN      C. STATE      D. ZIP CODE

3 P.O. Box 8131      4 Lexington      KY      40533

**VI. FACILITY LOCATION**

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER      B. COUNTY NAME      C. CITY OR TOWN      D. STATE      E. ZIP CODE      F. COUNTY CODE (if known)

5 8007 Buxton Road      Madison      Redstone Arsenal      AL      35898      045



CONTINUED FROM THE FRONT

VII. SIC CODES (4-digit, in order of priority)			
A. FIRST		B. SECOND	
C	7	4952	(specify) Sewage Treatment plant
15	16	19	
C. THIRD		D. FOURTH	
C	7		(specify)
15	16	19	

VIII. OPERATOR INFORMATION			
A. NAME			B. Is the name listed in Item VIII-A also the owner?
C	8	PDR Properties, Inc.	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
15	16		55 66

C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box: if "Other," specify.)			D. PHONE (area code & no.)
F = FEDERAL	M = PUBLIC (other than federal or state)	P (specify)	C
S = STATE	O = OTHER (specify)		A
P = PRIVATE			(859) 223-0425
	56		15 6 - 18 19 - 21 22 - 26

E. STREET OR P.O. BOX	
1029 Monarch Street, Suite 250	
26	55

F. CITY OR TOWN		G. STATE	H. ZIP CODE	IX. INDIAN LAND
C	B	Lexington,	KY	40513
15	16	40 41	42 47 - 51	52
				Is the facility located on Indian lands? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

X. EXISTING ENVIRONMENTAL PERMITS			
A. NPDES (Discharges to Surface Water)		D. PSD (Air Emissions from Proposed Sources)	
C	T	I	
9	N	AL 0062863	9 P
15	16	17 18	30 15 16 17 18

B. UIC (Underground Injection of Fluids)		E. OTHER (specify)	
C	T	I	
9	U		(specify)
15	16	17 18	30 15 16 17 18

C. RCRA (Hazardous Wastes)		E. OTHER (specify)	
C	T	I	
9	R		(specify)
15	16	17 18	30 15 16 17 18

**XI. MAP**  
 Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers, and other surface water bodies in the map area. See instructions for precise requirements.

**XII. NATURE OF BUSINESS (provide a brief description)**  
 This facility is 3.3 MGD activated sludge wastewater treatment plant. Treatment consists of lift pumping screening oxidation ditch aeration, final clarification, and ultra violet disinfection. Sludge is thickened, air dried, and transported off site to a municipal solid waste incinerator.

**XIII. CERTIFICATION (see instructions)**  
 I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
Elbert C. Ray	<i>Elbert C. Ray</i>	6/24/2014

COMMENTS FOR OFFICIAL USE ONLY	
C	
15	16

FROM U.S. GEOLOGICAL SURVEY MAP, TRIANA, 1982  
 REDSTONE ARSENAL CENTRAL WWTP  
 MADISON COUNTY, ALABAMA



MENT 1  
 I, ITEM XI

UTM GRID AND 1982 MAGNETIC  
 DECLINATION AT CENTER OF

FACILITY NAME AND PERMIT NUMBER:

Redstone Arsenal Central WWTP AL0062863

Form Approved 1/14/99  
OMB Number 2040-0086

FORM  
**2A**  
NPDES

**NPDES FORM 2A APPLICATION OVERVIEW**

**APPLICATION OVERVIEW**

Form 2A has been developed in a modular format and consists of a "Basic Application Information" packet and a "Supplemental Application Information" packet. The Basic Application Information packet is divided into two parts. All applicants must complete Parts A and C. Applicants with a design flow greater than or equal to 0.1 mgd must also complete Part B. Some applicants must also complete the Supplemental Application Information packet. The following items explain which parts of Form 2A you must complete.

**BASIC APPLICATION INFORMATION:**

- A. **Basic Application Information for all Applicants.** All applicants must complete questions A.1 through A.8. A treatment works that discharges effluent to surface waters of the United States must also answer questions A.9 through A.12.
- B. **Additional Application Information for Applicants with a Design Flow  $\geq$  0.1 mgd.** All treatment works that have design flows greater than or equal to 0.1 million gallons per day must complete questions B.1 through B.6.
- C. **Certification.** All applicants must complete Part C (Certification).

**SUPPLEMENTAL APPLICATION INFORMATION:**

- D. **Expanded Effluent Testing Data.** A treatment works that discharges effluent to surface waters of the United States and meets one or more of the following criteria must complete Part D (Expanded Effluent Testing Data):
  1. Has a design flow rate greater than or equal to 1 mgd,
  2. Is required to have a pretreatment program (or has one in place), or
  3. Is otherwise required by the permitting authority to provide the information.
- E. **Toxicity Testing Data.** A treatment works that meets one or more of the following criteria must complete Part E (Toxicity Testing Data):
  1. Has a design flow rate greater than or equal to 1 mgd,
  2. Is required to have a pretreatment program (or has one in place), or
  3. Is otherwise required by the permitting authority to submit results of toxicity testing.
- F. **Industrial User Discharges and RCRA/CERCLA Wastes.** A treatment works that accepts process wastewater from any significant industrial users (SIUs) or receives RCRA or CERCLA wastes must complete Part F (Industrial User Discharges and RCRA/CERCLA Wastes). SIUs are defined as:
  1. All industrial users subject to Categorical Pretreatment Standards under 40 Code of Federal Regulations (CFR) 403.6 and 40 CFR Chapter I, Subchapter N (see instructions); and
  2. Any other industrial user that:
    - a. Discharges an average of 25,000 gallons per day or more of process wastewater to the treatment works (with certain exclusions); or
    - b. Contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the treatment plant; or
    - c. Is designated as an SIU by the control authority.
- G. **Combined Sewer Systems.** A treatment works that has a combined sewer system must complete Part G (Combined Sewer Systems).

**ALL APPLICANTS MUST COMPLETE PART C (CERTIFICATION)**



**FACILITY NAME AND PERMIT NUMBER:**

Redstone Arsenal Central WWTP AL0062863

Form Approved 1/14/99  
OMB Number 2040-0086

**BASIC APPLICATION INFORMATION**

**PART A. BASIC APPLICATION INFORMATION FOR ALL APPLICANTS:**

All treatment works must complete questions A.1 through A.8 of this Basic Application Information packet.

**A.1. Facility Information.**

Facility name Redstone Arsenal Central Wastewater Treatment Plant

Mailing Address PDR Properties, Inc.  
P.O. Box 8131, Lexington, Kentucky 40533-8131

Contact person Bryce McCreless

Title Plant Superintendent/Operator

Telephone number (256) 650-5605

Facility Address 8007 Buxton Road  
(not P.O. Box) Redstone Arsenal, AL 35898

**A.2. Applicant Information.** If the applicant is different from the above, provide the following:

Applicant name PDR Properties, Inc.

Mailing Address P. O. Box 8131  
Lexington, Kentucky 40533-8131

Contact person Elbert C. Ray

Title President

Telephone number (859) 223-0425

**Is the applicant the owner or operator (or both) of the treatment works?**

owner       operator

Indicate whether correspondence regarding this permit should be directed to the facility or the applicant.

facility       applicant

**A.3. Existing Environmental Permits.** Provide the permit number of any existing environmental permits that have been issued to the treatment works (include state-issued permits).

NPDES AL 0062863 PSD \_\_\_\_\_

UIC \_\_\_\_\_ Other \_\_\_\_\_

RCRA \_\_\_\_\_ Other \_\_\_\_\_

**A.4. Collection System Information.** Provide information on municipalities and areas served by the facility. Provide the name and population of each entity and, if known, provide information on the type of collection system (combined vs. separate) and its ownership (municipal, private, etc.).

Name	Population Served	Type of Collection System	Ownership
<u>Redstone Arsenal</u>	<u>1,946 Resident</u>	<u>Gravity 85%</u>	<u>PDR Properties, Inc.</u>
_____	<u>36,000 Civilian &amp;</u>	<u>Pressure 15%</u>	<u>PDR Properties, Inc.</u>
_____	<u>Contractor 9a-5p</u>	_____	_____
<b>Total population served</b> <u>37,946</u>			

FACILITY NAME AND PERMIT NUMBER:

Redstone Arsenal Central WWTP AL0062863

Form Approved 1/14/99  
OMB Number 2040-0086

**A.5. Indian Country.**

a. Is the treatment works located in Indian Country?

Yes  No

b. Does the treatment works discharge to a receiving water that is either in Indian Country or that is upstream from (and eventually flows through) Indian Country?

Yes  No

**A.6. Flow.** Indicate the design flow rate of the treatment plant (i.e., the wastewater flow rate that the plant was built to handle). Also provide the average daily flow rate and maximum daily flow rate for each of the last three years. Each year's data must be based on a 12-month time period with the 12th month of "this year" occurring no more than three months prior to this application submittal.

a. Design flow rate 3.30 mgd

	<u>Two Years Ago</u>	<u>Last Year</u>	<u>This Year</u>
b. Annual average daily flow rate	<u>1.62</u>	<u>1.61</u>	<u>1.88</u> mgd
c. Maximum daily flow rate	<u>8.41</u>	<u>6.54</u>	<u>7.37</u> mgd

**A.7. Collection System.** Indicate the type(s) of collection system(s) used by the treatment plant. Check all that apply. Also estimate the percent contribution (by miles) of each.

Separate sanitary sewer 100.00 %  
 Combined storm and sanitary sewer \_\_\_\_\_ %

**A.8. Discharges and Other Disposal Methods.**

a. Does the treatment works discharge effluent to waters of the U.S.?  Yes  No

If yes, list how many of each of the following types of discharge points the treatment works uses:

- i. Discharges of treated effluent 1
- ii. Discharges of untreated or partially treated effluent 0
- iii. Combined sewer overflow points 0
- iv. Constructed emergency overflows (prior to the headworks) 0
- v. Other None 0

b. Does the treatment works discharge effluent to basins, ponds, or other surface impoundments that do not have outlets for discharge to waters of the U.S.?  Yes  No

If yes, provide the following for each surface impoundment:

Location: \_\_\_\_\_

Annual average daily volume discharged to surface impoundment(s) 0.00 mgd

Is discharge  continuous or  intermittent?

c. Does the treatment works land-apply treated wastewater?  Yes  No

If yes, provide the following for each land application site:

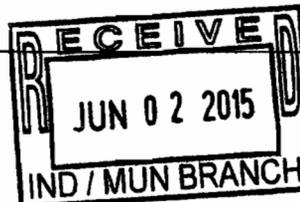
Location: \_\_\_\_\_

Number of acres: \_\_\_\_\_

Annual average daily volume applied to site: \_\_\_\_\_ Mgd

Is land application  continuous or  intermittent?

d. Does the treatment works discharge or transport treated or untreated wastewater to another treatment works?  Yes  No



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If yes, describe the mean(s) by which the wastewater from the treatment works is discharged or transported to the other treatment works (e.g., tank truck, pipe).

None

If transport is by a party other than the applicant, provide:

Transporter name: N/A

Mailing Address: \_\_\_\_\_  
\_\_\_\_\_

Contact person: N/A

Title: \_\_\_\_\_

Telephone number: \_\_\_\_\_

For each treatment works that receives this discharge, provide the following:

Name: N/A

Mailing Address: \_\_\_\_\_  
\_\_\_\_\_

Contact person: \_\_\_\_\_

Title: \_\_\_\_\_

Telephone number: \_\_\_\_\_

If known, provide the NPDES permit number of the treatment works that receives this discharge. \_\_\_\_\_

Provide the average daily flow rate from the treatment works into the receiving facility. \_\_\_\_\_ mgd

- e. Does the treatment works discharge or dispose of its wastewater in a manner not included in A.8.a through A.8.d above (e.g., underground percolation, well injection)? \_\_\_\_\_ Yes  No

If yes, provide the following for each disposal method:

Description of method (including location and size of site(s) if applicable):

N/A

Annual daily volume disposed of by this method: N/A

Is disposal through this method \_\_\_\_\_ continuous or \_\_\_\_\_ intermittent?



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**A.11. Description of Treatment.**

a. What levels of treatment are provided? Check all that apply.

Primary                       Secondary  
 Advanced                       Other. Describe: \_\_\_\_\_

b. Indicate the following removal rates (as applicable):

Design BOD<sub>5</sub> removal or Design CBOD<sub>5</sub> removal                      85.00 \_\_\_\_\_ %  
 Design SS removal                      85.00 \_\_\_\_\_ %  
 Design P removal                      \_\_\_\_\_ %  
 Design N removal                      \_\_\_\_\_ %  
 Other Screening \_\_\_\_\_ %

c. What type of disinfection is used for the effluent from this outfall? If disinfection varies by season, please describe.

Ultra Violet

If disinfection is by chlorination, is dechlorination used for this outfall?                       Yes                       No

d. Does the treatment plant have post aeration?                       Yes                       No

**A.12. Effluent Testing Information.** All Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three samples and must be no more than four and one-half years apart.

Outfall number: DSN001

PARAMETER	MAXIMUM DAILY VALUE		AVERAGE DAILY VALUE		
	Value	Units	Value	Units	Number of Samples
pH (Minimum)	7.10	s.u.			
pH (Maximum)	7.30	s.u.			
Flow Rate	7.37	MGD	1.88	MGD	365.00
Temperature (Winter)					
Temperature (Summer)					

\* For pH please report a minimum and a maximum daily value

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
	Conc.	Units	Conc.	Units	Number of Samples		

**CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.**

BIOCHEMICAL OXYGEN DEMAND (Report one)	BOD-5						
	CBOD-5	5.00	MG/L	4.00	MG/L	104.00	SM5210B201
FECAL COLIFORM		3,300.00	Col/100ML	39.00	Col/100ML	104.00	col./100ML
TOTAL SUSPENDED SOLIDS (TSS)		15.00	MG/L	8.00	MG/L	104.00	SGS1376585

**END OF PART A.  
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE**

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## BASIC APPLICATION INFORMATION

### PART B. ADDITIONAL APPLICATION INFORMATION FOR APPLICANTS WITH A DESIGN FLOW GREATER THAN OR EQUAL TO 0.1 MGD (100,000 gallons per day).

All applicants with a design flow rate  $\geq$  0.1 mgd must answer questions B.1 through B.6. All others go to Part C (Certification).

**B.1. Inflow and Infiltration.** Estimate the average number of gallons per day that flow into the treatment works from inflow and/or infiltration.

200,000.00 gpd

Briefly explain any steps underway or planned to minimize inflow and infiltration.

Flow monitoring & TV inspection with needed repairs

**B.2. Topographic Map.** Attach to this application a topographic map of the area extending at least one mile beyond facility property boundaries. This map must show the outline of the facility and the following information. (You may submit more than one map if one map does not show the entire area.)

- The area surrounding the treatment plant, including all unit processes.
- The major pipes or other structures through which wastewater enters the treatment works and the pipes or other structures through which treated wastewater is discharged from the treatment plant. Include outfalls from bypass piping, if applicable.
- Each well where wastewater from the treatment plant is injected underground.
- Wells, springs, other surface water bodies, and drinking water wells that are: 1) within 1/4 mile of the property boundaries of the treatment works, and 2) listed in public record or otherwise known to the applicant.
- Any areas where the sewage sludge produced by the treatment works is stored, treated, or disposed.
- If the treatment works receives waste that is classified as hazardous under the Resource Conservation and Recovery Act (RCRA) by truck, rail, or special pipe, show on the map where that hazardous waste enters the treatment works and where it is treated, stored, and/or disposed.

**B.3. Process Flow Diagram or Schematic.** Provide a diagram showing the processes of the treatment plant, including all bypass piping and all backup power sources or redundancy in the system. Also provide a water balance showing all treatment units, including disinfection (e.g., chlorination and dechlorination). The water balance must show daily average flow rates at influent and discharge points and approximate daily flow rates between treatment units. Include a brief narrative description of the diagram.

**B.4. Operation/Maintenance Performed by Contractor(s).**

Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor?  Yes  No

If yes, list the name, address, telephone number, and status of each contractor and describe the contractor's responsibilities (attach additional pages if necessary).

Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_  
\_\_\_\_\_

Telephone Number: \_\_\_\_\_

Responsibilities of Contractor: \_\_\_\_\_

**B.5. Scheduled Improvements and Schedules of Implementation.** Provide information on any uncompleted implementation schedule or uncompleted plans for improvements that will affect the wastewater treatment, effluent quality, or design capacity of the treatment works. If the treatment works has several different implementation schedules or is planning several improvements, submit separate responses to question B.5 for each. (If none, go to question B.6.)

- a. List the outfall number (assigned in question A.9) for each outfall that is covered by this implementation schedule.

N/A

- b. Indicate whether the planned improvements or implementation schedule are required by local, State, or Federal agencies.

Yes  No

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c. If the answer to B.5.b is "Yes," briefly describe, including new maximum daily inflow rate (if applicable).

N/A

d. Provide dates imposed by any compliance schedule or any actual dates of completion for the implementation steps listed below, as applicable. For improvements planned independently of local, State, or Federal agencies, indicate planned or actual completion dates, as applicable. Indicate dates as accurately as possible.

Implementation Stage	Schedule	Actual Completion
	MM / DD / YYYY	MM / DD / YYYY
- Begin construction	__/__/__	__/__/__
- End construction	__/__/__	__/__/__
- Begin discharge	__/__/__	__/__/__
- Attain operational level	__/__/__	__/__/__

e. Have appropriate permits/clearances concerning other Federal/State requirements been obtained?  Yes  No

Describe briefly: \_\_\_\_\_  
\_\_\_\_\_

**B.6. EFFLUENT TESTING DATA (GREATER THAN 0.1 MGD ONLY).**

Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall Number: DSN001

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
	Conc.	Units	Conc.	Units	Number of Samples		
<b>CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.</b>							
AMMONIA (as N)	1.00	MG/L	0.31	MG/L	104.00	SM4500NH3C	
CHLORINE (TOTAL RESIDUAL, TRC)							
DISSOLVED OXYGEN							
TOTAL KJELDAHL NITROGEN (TKN)	5.15	MG/L	2.72	MG/L	12.00	SM4500NorgC	
NITRATE PLUS NITRITE NITROGEN	22.60	MG/L	13.03	MG/L	12.00	EPA 300	
OIL and GREASE							
PHOSPHORUS (Total)	9.98	MG/L	3.34	MG/L	12.00	EPA365	
TOTAL DISSOLVED SOLIDS (TDS)							
OTHER							

**END OF PART B.  
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE**

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Form Approved 1/14/99  
OMB Number 2040-0086**BASIC APPLICATION INFORMATION****PART C. CERTIFICATION**

All applicants must complete the Certification Section. Refer to instructions to determine who is an officer for the purposes of this certification. All applicants must complete all applicable sections of Form 2A, as explained in the Application Overview. Indicate below which parts of Form 2A you have completed and are submitting. By signing this certification statement, applicants confirm that they have reviewed Form 2A and have completed all sections that apply to the facility for which this application is submitted.

**Indicate which parts of Form 2A you have completed and are submitting:**

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Basic Application Information packet | Supplemental Application Information packet:   |
|  | <input type="checkbox"/> Part D (Expanded Effluent Testing Data)                               |
|  | <input checked="" type="checkbox"/> Part E (Toxicity Testing: Biomonitoring Data)              |
|  | <input checked="" type="checkbox"/> Part F (Industrial User Discharges and RCRA/CERCLA Wastes) |
|  | <input type="checkbox"/> Part G (Combined Sewer Systems)                                       |

**ALL APPLICANTS MUST COMPLETE THE FOLLOWING CERTIFICATION.**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and official title Elbert C. Ray President PDR Properties, Inc.

Signature *Elbert C. Ray*

Telephone number (859) 223-0425

Date signed 6/24/14

Upon request of the permitting authority, you must submit any other information necessary to assess wastewater treatment practices at the treatment works or identify appropriate permitting requirements.

**SEND COMPLETED FORMS TO:**

EPA Form 3510-2A (Rev. 1-99). Replaces EPA forms 7550-6 &amp; 7550-22.

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**SUPPLEMENTAL APPLICATION INFORMATION**

**PART D. EXPANDED EFFLUENT TESTING DATA**

**Refer to the directions on the cover page to determine whether this section applies to the treatment works.**

**Effluent Testing: 1.0 mgd and Pretreatment Treatment Works.** If the treatment works has a design flow greater than or equal to 1.0 mgd or it has (or is required to have) a pretreatment program, or is otherwise required by the permitting authority to provide the data, then provide effluent testing data for the following pollutants. Provide the indicated effluent testing information and any other information required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analyses conducted using 40 CFR Part 136 methods. In addition, these data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. Indicate in the blank rows provided below any data you may have on pollutants not specifically listed in this form. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall number: SN001 (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
<b>METALS (TOTAL RECOVERABLE), CYANIDE, PHENOLS, AND HARDNESS.</b>											
ANTIMONY											
ARSENIC											
BERYLLIUM											
CADMIUM											
CHROMIUM											
COPPER											
LEAD											
MERCURY											
NICKEL											
SELENIUM											
SILVER											
THALLIUM											
ZINC											
CYANIDE											
TOTAL PHENOLIC COMPOUNDS											
HARDNESS (AS CaCO <sub>3</sub> )											
Use this space (or a separate sheet) to provide information on other metals requested by the permit writer.											

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Outfall number: \_\_\_\_\_ (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL	
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples			
<b>VOLATILE ORGANIC COMPOUNDS.</b>												
ACROLEIN												
ACRYLONITRILE												
BENZENE												
BROMOFORM												
CARBON TETRACHLORIDE												
CLOROBENZENE												
CHLORODIBROMO-METHANE												
CHLOROETHANE												
2-CHLORO-ETHYLVINYL ETHER												
CHLOROFORM												
DICHLOROBROMO-METHANE												
1,1-DICHLOROETHANE												
1,2-DICHLOROETHANE												
TRANS-1,2-DICHLORO-ETHYLENE												
1,1-DICHLOROETHYLENE												
1,2-DICHLOROPROPANE												
1,3-DICHLORO-PROPYLENE												
ETHYLBENZENE												
METHYL BROMIDE												
METHYL CHLORIDE												
METHYLENE CHLORIDE												
1,1,2,2-TETRACHLORO-ETHANE												
TETRACHLORO-ETHYLENE												
TOLUENE												

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Outfall number: \_\_\_\_\_ (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL	
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples			
1,1,1-TRICHLOROETHANE												
1,1,2-TRICHLOROETHANE												
TRICHLOROETHYLENE												
VINYL CHLORIDE												

Use this space (or a separate sheet) to provide information on other volatile organic compounds requested by the permit writer.

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**ACID-EXTRACTABLE COMPOUNDS**

P-CHLORO-M-CRESOL												
2-CHLOROPHENOL												
2,4-DICHLOROPHENOL												
2,4-DIMETHYLPHENOL												
4,6-DINITRO-O-CRESOL												
2,4-DINITROPHENOL												
2-NITROPHENOL												
4-NITROPHENOL												
PENTACHLOROPHENOL												
PHENOL												
2,4,6-TRICHLOROPHENOL												

Use this space (or a separate sheet) to provide information on other acid-extractable compounds requested by the permit writer.

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**BASE-NEUTRAL COMPOUNDS.**

ACENAPHTHENE												
ACENAPHTHYLENE												
ANTHRACENE												
BENZIDINE												
BENZO(A)ANTHRACENE												
BENZO(A)PYRENE												

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Outfall number: \_\_\_\_\_ (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL	
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples			
3,4 BENZO-FLUORANTHENE												
BENZO(GHI)PERYLENE												
BENZO(K)FLUORANTHENE												
BIS (2-CHLOROETHOXY) METHANE												
BIS (2-CHLOROETHYL)-ETHER												
BIS (2-CHLOROISO-PROPYL) ETHER												
BIS (2-ETHYLHEXYL) PHTHALATE												
4-BROMOPHENYL PHENYL ETHER												
BUTYL BENZYL PHTHALATE												
2-CHLORONAPHTHALENE												
4-CHLORPHENYL PHENYL ETHER												
CHRYSENE												
DI-N-BUTYL PHTHALATE												
DI-N-OCTYL PHTHALATE												
DIBENZO(A,H) ANTHRACENE												
1,2-DICHLOROBENZENE												
1,3-DICHLOROBENZENE												
1,4-DICHLOROBENZENE												
3,3-DICHLOROBENZIDINE												
DIETHYL PHTHALATE												
DIMETHYL PHTHALATE												
2,4-DINITROTOLUENE												
2,6-DINITROTOLUENE												
1,2-DIPHENYLHYDRAZINE												

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Outfall number: \_\_\_\_\_ (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
FLUORANTHENE											
FLUORENE											
HEXACHLOROBENZENE											
HEXACHLOROBUTADIENE											
HEXACHLOROCYCLO-PENTADIENE											
HEXACHLOROETHANE											
INDENO(1,2,3-CD)PYRENE											
ISOPHORONE											
NAPHTHALENE											
NITROBENZENE											
N-NITROSODI-N-PROPYLAMINE											
N-NITROSODI- METHYLAMINE											
N-NITROSODI-PHENYLAMINE											
PHENANTHRENE											
PYRENE											
1,2,4-TRICHLOROBENZENE											

Use this space (or a separate sheet) to provide information on other base-neutral compounds requested by the permit writer.

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Use this space (or a separate sheet) to provide information on other pollutants (e.g., pesticides) requested by the permit writer.

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**END OF PART D.  
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM  
2A YOU MUST COMPLETE**

**FACILITY NAME AND PERMIT NUMBER:**

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**SUPPLEMENTAL APPLICATION INFORMATION**

**PART E. TOXICITY TESTING DATA**

POTWs meeting one or more of the following criteria must provide the results of whole effluent toxicity tests for acute or chronic toxicity for each of the facility's discharge points: 1) POTWs with a design flow rate greater than or equal to 1.0 mgd; 2) POTWs with a pretreatment program (or those that are required to have one under 40 CFR Part 403); or 3) POTWs required by the permitting authority to submit data for these parameters.

- At a minimum, these results must include quarterly testing for a 12-month period within the past 1 year using multiple species (minimum of two species), or the results from four tests performed at least annually in the four and one-half years prior to the application, provided the results show no appreciable toxicity, and testing for acute and/or chronic toxicity, depending on the range of receiving water dilution. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136.
- In addition, submit the results of any other whole effluent toxicity tests from the past four and one-half years. If a whole effluent toxicity test conducted during the past four and one-half years revealed toxicity, provide any information on the cause of the toxicity or any results of a toxicity reduction evaluation, if one was conducted.
- If you have already submitted any of the information requested in Part E, you need not submit it again. Rather, provide the information requested in question E.4 for previously submitted information. If EPA methods were not used, report the reasons for using alternate methods. If test summaries are available that contain all of the information requested below, they may be submitted in place of Part E.

If no biomonitoring data is required, do not complete Part E. Refer to the Application Overview for directions on which other sections of the form to complete.

**E.1. Required Tests.**

Indicate the number of whole effluent toxicity tests conducted in the past four and one-half years.

2 chronic      2 acute

**E.2. Individual Test Data.** Complete the following chart for each whole effluent toxicity test conducted in the last four and one-half years. Allow one column per test (where each species constitutes a test). Copy this page if more than three tests are being reported.

Test number: 10/10/2012      Test number: 10/10/2012      Test number: 10/30/2013

a. Test information.

Test species & test method number	P.p-Acute-48 hours	C.d-Acute-48 hours	P.p - Acute
Age at initiation of test	48 hours	24 hours	72 hours
Outfall number	DSN001	DSN001	DSN001
Dates sample collected	10/09/2012	10/09/2012	10/30/2013
Date test started	10/10/2012	10/10/2012	11/01/2013
Duration	24 hours	24 hours	24 hours

b. Give toxicity test methods followed.

Manual title	Methods of Measuring the	Acute Toxicity of Effluent &	Rec. waters to Freshwater Or
Edition number and year of publication	5th Edition 2002	5th Edition 2002	5th Edition 2002
Page number(s)	51-52, 55-56	51-52, 55-56	51-52, 55-56

c. Give the sample collection method(s) used. For multiple grab samples, indicate the number of grab samples used.

24-Hour composite	x	x	x
Grab			

d. Indicate where the sample was taken in relation to disinfection. (Check all that apply for each)

Before disinfection			
After disinfection	x	x	x
After dechlorination			

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**SUPPLEMENTAL APPLICATION INFORMATION**

**PART E. TOXICITY TESTING DATA**

POTWs meeting one or more of the following criteria must provide the results of whole effluent toxicity tests for acute or chronic toxicity for each of the facility's discharge points: 1) POTWs with a design flow rate greater than or equal to 1.0 mgd; 2) POTWs with a pretreatment program (or those that are required to have one under 40 CFR Part 403); or 3) POTWs required by the permitting authority to submit data for these parameters.

- At a minimum, these results must include quarterly testing for a 12-month period within the past 1 year using multiple species (minimum of two species), or the results from four tests performed at least annually in the four and one-half years prior to the application, provided the results show no appreciable toxicity, and testing for acute and/or chronic toxicity, depending on the range of receiving water dilution. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136.
- In addition, submit the results of any other whole effluent toxicity tests from the past four and one-half years. If a whole effluent toxicity test conducted during the past four and one-half years revealed toxicity, provide any information on the cause of the toxicity or any results of a toxicity reduction evaluation, if one was conducted.
- If you have already submitted any of the information requested in Part E, you need not submit it again. Rather, provide the information requested in question E.4 for previously submitted information. If EPA methods were not used, report the reasons for using alternate methods. If test summaries are available that contain all of the information requested below, they may be submitted in place of Part E.

If no biomonitoring data is required, do not complete Part E. Refer to the Application Overview for directions on which other sections of the form to complete.

**E.1. Required Tests.**

Indicate the number of whole effluent toxicity tests conducted in the past four and one-half years.

2 chronic      2 acute

**E.2. Individual Test Data.** Complete the following chart for each whole effluent toxicity test conducted in the last four and one-half years. Allow one column per test (where each species constitutes a test). Copy this page if more than three tests are being reported.

Test number: 10/30/13      Test number: \_\_\_\_\_      Test number: \_\_\_\_\_

a. Test information.

Test species & test method number	C.d. Acute		
Age at initiation of test	24 hours		
Outfall number	DSN001		
Dates sample collected	10/30/2013		
Date test started	11/01/2013		
Duration	24 hours		

b. Give toxicity test methods followed.

Manual title	Methods for Measuring the Acute Toxicity of Effluents and	Rec. wates of Freshwater or
Edition number and year of publication	5th Edition 2002	5th Edition 2002
Page number(s)	51-52, 55-56	51-52, 55-56

c. Give the sample collection method(s) used. For multiple grab samples, indicate the number of grab samples used.

24-Hour composite	x		
Grab			

d. Indicate where the sample was taken in relation to disinfection. (Check all that apply for each)

Before disinfection			
After disinfection	x		
After dechlorination			

**FACILITY NAME AND PERMIT NUMBER:**

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OMB Number 2040-0086

Test number: \_\_\_\_\_ Test number: \_\_\_\_\_ Test number: \_\_\_\_\_

e. Describe the point in the treatment process at which the sample was collected.

Sample was collected:	@UV Effluent	@ UV Effluent	@ UV effluent
-----------------------	--------------	---------------	---------------

f. For each test, include whether the test was intended to assess chronic toxicity, acute toxicity, or both.

Chronic toxicity		x	
Acute toxicity	x		x

g. Provide the type of test performed.

Static			
Static-renewal	x	x	
Flow-through			

h. Source of dilution water. If laboratory water, specify type; if receiving water, specify source.

Laboratory water	MHSFW	MHSFW	MHSFW
Receiving water	N/A	N/A	N/A

i. Type of dilution water. If salt water, specify "natural" or type of artificial sea salts or brine used.

Fresh water	N/A	N/A	N/A
Salt water	N/A	N/A	N/A

j. Give the percentage effluent used for all concentrations in the test series.

	0,,2,.4,.6,.8,1.0	0,.1,.2,.3,.4,.5	0,,2,.4,.6,.8,1.0

k. Parameters measured during the test. (State whether parameter meets test method specifications)

pH	7.20 - 8.20	7.1-8.2	7.8-8.0
Salinity	N/A	N/A	N/A
Temperature	23.3 to 25.0	23.5 to 24.8	24.7 to 24.9
Ammonia	N/A	N/A	N/A
Dissolved oxygen	7.8-8.0	7.8-8.0	7.8-8.0

l. Test Results.

Acute:

Percent survival in 100% effluent	100.00 %	%	100.00 %
LC <sub>50</sub>	0.81		0.80
95% C.I.	0.74 %	%	0.68 %
Control percent survival	100.00 %	%	100.00 %
Other (describe)			

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 Redstone Arsenal Central WWTP AL0062863

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Chronic:			
NOEC	%	%	%
IC <sub>25</sub>	%	%	%
Control percent survival	%	100.00 %	100.00 %
Other (describe)			

**m. Quality Control/Quality Assurance.**

Is reference toxicant data available?	Yes	Yes	Yes
Was reference toxicant test within acceptable bounds?	Yes	Yes	Yes
What date was reference toxicant test run (MM/DD/YYYY)?	10/10/2012	10/10/2012	10/10/2012
Other (describe)			

**E.3. Toxicity Reduction Evaluation.** Is the treatment works involved in a Toxicity Reduction Evaluation?

     Yes  No      If yes, describe: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**E.4. Summary of Submitted Biomonitoring Test Information.** If you have submitted biomonitoring test information, or information regarding the cause of toxicity, within the past four and one-half years, provide the dates the information was submitted to the permitting authority and a summary of the results.

Date submitted: \_\_\_\_\_ (MM/DD/YYYY)

Summary of results: (see instructions)

Pass Acute Tests

\_\_\_\_\_

\_\_\_\_\_

**END OF PART E.**  
**REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE.**

**FACILITY NAME AND PERMIT NUMBER:**

Redstone Arsenal Central WWTP AL0062863

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Test number: \_\_\_\_\_ Test number: \_\_\_\_\_ Test number: \_\_\_\_\_

e. Describe the point in the treatment process at which the sample was collected.

Sample was collected:	UV System		
-----------------------	-----------	--	--

f. For each test, include whether the test was intended to assess chronic toxicity, acute toxicity, or both.

Chronic toxicity	x		
Acute toxicity			

g. Provide the type of test performed.

Static	x		
Static-renewal			
Flow-through			

h. Source of dilution water. If laboratory water, specify type; if receiving water, specify source.

Laboratory water	MHSFW		
Receiving water	N/A		

i. Type of dilution water. If salt water, specify "natural" or type of artificial sea salts or brine used.

Fresh water	N/A		
Salt water	N/A		

j. Give the percentage effluent used for all concentrations in the test series.

	0, .1, .2, .3, .4, .5		

k. Parameters measured during the test. (State whether parameter meets test method specifications)

pH	6.75		
Salinity	N/A		
Temperature	23.5 to 24.8		
Ammonia	N/A		
Dissolved oxygen	7.8 to 8.0		

l. Test Results.

Acute:

Percent survival in 100% effluent	%	%	%
LC <sub>50</sub>			
95% C.I.	%	%	%
Control percent survival	%	%	%
Other (describe)			

**FACILITY NAME AND PERMIT NUMBER:**

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**Chronic:**

NOEC	%	%	%
IC <sub>25</sub>	%	%	%
Control percent survival	100.00 %	%	%
Other (describe)			

**m. Quality Control/Quality Assurance.**

Is reference toxicant data available?	Yes		
Was reference toxicant test within acceptable bounds?	Yes		
What date was reference toxicant test run (MM/DD/YYYY)?	10/30/2013		
Other (describe)			

**E.3. Toxicity Reduction Evaluation.** Is the treatment works involved in a Toxicity Reduction Evaluation?

Yes  No      If yes, describe: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**E.4. Summary of Submitted Biomonitoring Test Information.** If you have submitted biomonitoring test information, or information regarding the cause of toxicity, within the past four and one-half years, provide the dates the information was submitted to the permitting authority and a summary of the results.

Date submitted: \_\_\_\_\_ (MM/DD/YYYY)

Summary of results: (see instructions)

Pass Acute & Chronic  
 \_\_\_\_\_

**END OF PART E.  
 REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM  
 2A YOU MUST COMPLETE.**

**FACILITY NAME AND PERMIT NUMBER:**

Redstone Arsenal Central WWTP AL0062863

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**SUPPLEMENTAL APPLICATION INFORMATION**

**PART F. INDUSTRIAL USER DISCHARGES AND RCRA/CERCLA WASTES**

All treatment works receiving discharges from significant industrial users or which receive RCRA, CERCLA, or other remedial wastes must complete Part F.

**GENERAL INFORMATION:**

**F.1. Pretreatment Program.** Does the treatment works have, or is it subject to, an approved pretreatment program?

Yes  No

**F.2. Number of Significant Industrial Users (SIUs) and Categorical Industrial Users (CIUs).** Provide the number of each of the following types of industrial users that discharge to the treatment works.

a. Number of non-categorical SIUs. 2.00

b. Number of CIUs. \_\_\_\_\_

**SIGNIFICANT INDUSTRIAL USER INFORMATION:**

Supply the following information for each SIU. If more than one SIU discharges to the treatment works, copy questions F.3 through F.8 and provide the information requested for each SIU.

**F.3. Significant Industrial User Information.** Provide the name and address of each SIU discharging to the treatment works. Submit additional pages as necessary.

Name: Marshall Space Flight Center (NASA) SIDIU084500027

Mailing Address: Building 4200 - Room 427 - Redstone Arsenal  
Huntsville, Alabama 35813

**F.4. Industrial Processes.** Describe all of the industrial processes that affect or contribute to the SIU's discharge.

Preparation of Classified Equipment

**F.5. Principal Product(s) and Raw Material(s).** Describe all of the principal processes and raw materials that affect or contribute to the SIU's discharge.

Principal product(s): Classified Equipment

Raw material(s): Unknown

**F.6. Flow Rate.**

a. Process wastewater flow rate. Indicate the average daily volume of process wastewater discharged into the collection system in gallons per day (gpd) and whether the discharge is continuous or intermittent.

45,000.00 gpd (  continuous or  intermittent)

b. Non-process wastewater flow rate. Indicate the average daily volume of non-process wastewater flow discharged into the collection system in gallons per day (gpd) and whether the discharge is continuous or intermittent.

45,000.00 gpd (  continuous or  intermittent)

**F.7. Pretreatment Standards.** Indicate whether the SIU is subject to the following:

a. Local limits  Yes  No

b. Categorical pretreatment standards  Yes  No

If subject to categorical pretreatment standards, which category and subcategory?

CD,CR,CR6,CU, PB,Ni,AG, Zn,CN, TTO

**FACILITY NAME AND PERMIT NUMBER:**

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**F.8. Problems at the Treatment Works Attributed to Waste Discharged by the SIU.** Has the SIU caused or contributed to any problems (e.g., upsets, interference) at the treatment works in the past three years?

Yes  No If yes, describe each episode.

\_\_\_\_\_  
\_\_\_\_\_

**RCRA HAZARDOUS WASTE RECEIVED BY TRUCK, RAIL, OR DEDICATED PIPELINE:**

**F.9. RCRA Waste.** Does the treatment works receive or has it in the past three years received RCRA hazardous waste by truck, rail, or dedicated pipe?  Yes  No (go to F.12.)

**F.10. Waste Transport.** Method by which RCRA waste is received (check all that apply):

Truck  Rail  Dedicated Pipe

**F.11. Waste Description.** Give EPA hazardous waste number and amount (volume or mass, specify units).

<u>EPA Hazardous Waste Number</u>	<u>Amount</u>	<u>Units</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

**CERCLA (SUPERFUND) WASTEWATER, RCRA REMEDIATION/CORRECTIVE ACTION WASTEWATER, AND OTHER REMEDIAL ACTIVITY WASTEWATER:**

**F.12. Remediation Waste.** Does the treatment works currently (or has it been notified that it will) receive waste from remedial activities?

Yes (complete F.13 through F.15.)  No

Provide a list of sites and the requested information (F.13 - F.15.) for each current and future site.

**F.13. Waste Origin.** Describe the site and type of facility at which the CERCLA/RCRA/or other remedial waste originates (or is expected to originate in the next five years).

Groundwater from test wells  
\_\_\_\_\_  
\_\_\_\_\_

**F.14. Pollutants.** List the hazardous constituents that are received (or are expected to be received). Include data on volume and concentration, if known. (Attach additional sheets if necessary).

None  
\_\_\_\_\_  
\_\_\_\_\_

**F.15. Waste Treatment.**

a. Is this waste treated (or will it be treated) prior to entering the treatment works?

Yes  No

If yes, describe the treatment (provide information about the removal efficiency):

Tested prior to disposal to WWTP system and has no parameters that would exceed acceptable limits of pretreatment permit  
\_\_\_\_\_

b. Is the discharge (or will the discharge be) continuous or intermittent?

Continuous  Intermittent If intermittent, describe discharge schedule.

Monthly 15,000 to 18,000 gallons  
\_\_\_\_\_

**END OF PART F.  
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE**



**FACILITY NAME AND PERMIT NUMBER:**

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- c. Give the average volume per CSO event.  
\_\_\_\_\_ million gallons (\_\_\_\_ actual or \_\_\_\_ approx.)
- d. Give the minimum rainfall that caused a CSO event in the last year.  
\_\_\_\_\_ inches of rainfall

**G.5. Description of Receiving Waters.**

- a. Name of receiving water: N/A
- b. Name of watershed/river/stream system: \_\_\_\_\_  
  
United States Soil Conservation Service 14-digit watershed code (if known): \_\_\_\_\_
- c. Name of State Management/River Basin: \_\_\_\_\_  
  
United States Geological Survey 8-digit hydrologic cataloging unit code (if known): \_\_\_\_\_

**G.6. CSO Operations.**

Describe any known water quality impacts on the receiving water caused by this CSO (e.g., permanent or intermittent beach closings, permanent or intermittent shell fish bed closings, fish kills, fish advisories, other recreational loss, or violation of any applicable State water quality standard).

\_\_\_\_\_  
\_\_\_\_\_

**END OF PART G.  
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM  
2A YOU MUST COMPLETE.**

**FACILITY NAME AND PERMIT NUMBER:**

Redstone Arsenal Central WWTP AL0062863

Form Approved 1/14/99  
OMB Number 2040-0086

**SUPPLEMENTAL APPLICATION INFORMATION**

**PART F. INDUSTRIAL USER DISCHARGES AND RCRA/CERCLA WASTES**

All treatment works receiving discharges from significant industrial users or which receive RCRA, CERCLA, or other remedial wastes must complete Part F.

**GENERAL INFORMATION:**

**F.1. Pretreatment Program.** Does the treatment works have, or is it subject to, an approved pretreatment program?

Yes  No

**F.2. Number of Significant Industrial Users (SIUs) and Categorical Industrial Users (CIUs).** Provide the number of each of the following types of industrial users that discharge to the treatment works.

- a. Number of non-categorical SIUs. 2.00
- b. Number of CIUs. 0.00

**SIGNIFICANT INDUSTRIAL USER INFORMATION:**

Supply the following information for each SIU. If more than one SIU discharges to the treatment works, copy questions F.3 through F.8 and provide the information requested for each SIU.

**F.3. Significant Industrial User Information.** Provide the name and address of each SIU discharging to the treatment works. Submit additional pages as necessary.

Name: International Specialty Products SID IU0845 00028

Mailing Address: Building 5565 - Redstone Arsenal  
Huntsville, AL 35804

**F.4. Industrial Processes.** Describe all of the industrial processes that affect or contribute to the SIU's discharge.

Ammonia & Steam to process Iron Powder

**F.5. Principal Product(s) and Raw Material(s).** Describe all of the principal processes and raw materials that affect or contribute to the SIU's discharge.

Principal product(s): Food Grade Food Additive

Raw material(s): Iron Powder

**F.6. Flow Rate.**

a. Process wastewater flow rate. Indicate the average daily volume of process wastewater discharged into the collection system in gallons per day (gpd) and whether the discharge is continuous or intermittent.

10,000.00 - 20,000 gpd (  continuous or  intermittent)

b. Non-process wastewater flow rate. Indicate the average daily volume of non-process wastewater flow discharged into the collection system in gallons per day (gpd) and whether the discharge is continuous or intermittent.

10,000.00 - 20,000 gpd (  continuous or  intermittent)

**F.7. Pretreatment Standards.** Indicate whether the SIU is subject to the following:

a. Local limits  Yes  No

b. Categorical pretreatment standards  Yes  No

If subject to categorical pretreatment standards, which category and subcategory?

Iron Powder

**FACILITY NAME AND PERMIT NUMBER:**

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**F.8. Problems at the Treatment Works Attributed to Waste Discharged by the SIU.** Has the SIU caused or contributed to any problems (e.g., upsets, interference) at the treatment works in the past three years?

Yes  No If yes, describe each episode.

\_\_\_\_\_  
\_\_\_\_\_

**RCRA HAZARDOUS WASTE RECEIVED BY TRUCK, RAIL, OR DEDICATED PIPELINE:**

**F.9. RCRA Waste.** Does the treatment works receive or has it in the past three years received RCRA hazardous waste by truck, rail, or dedicated pipe?  Yes  No (go to F.12.)

**F.10. Waste Transport.** Method by which RCRA waste is received (check all that apply):

Truck  Rail  Dedicated Pipe

**F.11. Waste Description.** Give EPA hazardous waste number and amount (volume or mass, specify units).

<u>EPA Hazardous Waste Number</u>	<u>Amount</u>	<u>Units</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

**CERCLA (SUPERFUND) WASTEWATER, RCRA REMEDIATION/CORRECTIVE ACTION WASTEWATER, AND OTHER REMEDIAL ACTIVITY WASTEWATER:**

**F.12. Remediation Waste.** Does the treatment works currently (or has it been notified that it will) receive waste from remedial activities?

Yes (complete F.13 through F.15.)  No

Provide a list of sites and the requested information (F.13 - F.15.) for each current and future site.

**F.13. Waste Origin.** Describe the site and type of facility at which the CERCLA/RCRA/or other remedial waste originates (or is expected to originate in the next five years).

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**F.14. Pollutants.** List the hazardous constituents that are received (or are expected to be received). Include data on volume and concentration, if known. (Attach additional sheets if necessary).

\_\_\_\_\_  
\_\_\_\_\_

**F.15. Waste Treatment.**

a. Is this waste treated (or will it be treated) prior to entering the treatment works?

Yes  No

If yes, describe the treatment (provide information about the removal efficiency):

\_\_\_\_\_  
\_\_\_\_\_

b. Is the discharge (or will the discharge be) continuous or intermittent?

Continuous  Intermittent If intermittent, describe discharge schedule.

\_\_\_\_\_

**END OF PART F.  
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM  
2A YOU MUST COMPLETE**

**FACILITY NAME AND PERMIT NUMBER:**

Redstone Arsenal Central WWTP AL0062863

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**SUPPLEMENTAL APPLICATION INFORMATION**

**PART G. COMBINED SEWER SYSTEMS**

**If the treatment works has a combined sewer system, complete Part G.**

**G.1. System Map.** Provide a map indicating the following: (may be included with Basic Application Information)

- a. All CSO discharge points.
- b. Sensitive use areas potentially affected by CSOs (e.g., beaches, drinking water supplies, shellfish beds, sensitive aquatic ecosystems, and outstanding natural resource waters).
- c. Waters that support threatened and endangered species potentially affected by CSOs.

**G.2. System Diagram.** Provide a diagram, either in the map provided in G.1. or on a separate drawing, of the combined sewer collection system that includes the following information:

- a. Locations of major sewer trunk lines, both combined and separate sanitary.
- b. Locations of points where separate sanitary sewers feed into the combined sewer system.
- c. Locations of in-line and off-line storage structures.
- d. Locations of flow-regulating devices.
- e. Locations of pump stations.

**CSO OUTFALLS:**

**Complete questions G.3 through G.6 once for each CSO discharge point.**

**G.3. Description of Outfall.**

- a. Outfall number \_\_\_\_\_
- b. Location \_\_\_\_\_  
 (City or town, if applicable) (Zip Code)  
 \_\_\_\_\_  
 (County) (State)  
 \_\_\_\_\_  
 (Latitude) (Longitude)
- c. Distance from shore (if applicable) \_\_\_\_\_ ft.
- d. Depth below surface (if applicable) \_\_\_\_\_ ft.
- e. Which of the following were monitored during the last year for this CSO?  
 \_\_\_ Rainfall      \_\_\_ CSO pollutant concentrations      \_\_\_ CSO frequency  
 \_\_\_ CSO flow volume      \_\_\_ Receiving water quality
- f. How many storm events were monitored during the last year? \_\_\_\_\_

**G.4. CSO Events.**

- a. Give the number of CSO events in the last year.  
 \_\_\_\_\_ events (\_\_\_ actual or \_\_\_ approx.)
- b. Give the average duration per CSO event.  
 \_\_\_\_\_ hours (\_\_\_ actual or \_\_\_ approx.)

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- c. Give the average volume per CSO event.  
\_\_\_\_\_ million gallons (\_\_\_\_ actual or \_\_\_\_ approx.)
- d. Give the minimum rainfall that caused a CSO event in the last year.  
\_\_\_\_\_ inches of rainfall

**G.5. Description of Receiving Waters.**

- a. Name of receiving water: N/A
- b. Name of watershed/river/stream system: \_\_\_\_\_  
  
United States Soil Conservation Service 14-digit watershed code (if known): \_\_\_\_\_
- c. Name of State Management/River Basin: \_\_\_\_\_  
  
United States Geological Survey 8-digit hydrologic cataloging unit code (if known): \_\_\_\_\_

**G.6. CSO Operations.**

Describe any known water quality impacts on the receiving water caused by this CSO (e.g., permanent or intermittent beach closings, permanent or intermittent shell fish bed closings, fish kills, fish advisories, other recreational loss, or violation of any applicable State water quality standard).

\_\_\_\_\_  
\_\_\_\_\_

**END OF PART G.  
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM  
2A YOU MUST COMPLETE.**

# PDR Properties, Inc.

---

1029 Monarch Street, Suite 250  
Lexington, Kentucky 40513  
859.223.0425 Phone  
859.223.0459 FAX

January 15, 2015

Alabama Department of Environmental Management  
Municipal Section – Water Division  
1400 Coliseum Blvd.  
Montgomery, AL 36110-2400

Attn: Stephanie Ammons

RE: Permit Renewal – Form 2A, Section D  
NPDES Permit No. AL0062863

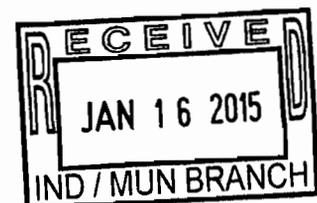
Attached are two completed copies of part D of form 2A. The data represents three (3) effluent sample tests. Industrial users were discharging at a normal rate during sample gathering.

Should have any questions, or require additional information, please feel free to contact me at 859.223.0425.

Sincerely,



L. Marie Jacobs  
Corporate Office Manager



FACILITY NAME AND PERMIT NUMBER:  
 Redstone Arsenal Central WWTP A:L 0062863

**SUPPLEMENTAL APPLICATION INFORMATION**

**PART D. EXPANDED EFFLUENT TESTING DATA**

Refer to the directions on the cover page to determine whether this section applies to the treatment works.

**Effluent Testing: 1.0 mgd and Pretreatment Treatment Works.** If the treatment works has a design flow greater than or equal to 1.0 mgd or it has (or is required to have) a pretreatment program, or is otherwise required by the permitting authority to provide the data, then provide effluent testing data for the following pollutants. Provide the indicated effluent testing information and any other information required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analyses conducted using 40 CFR Part 136 methods. In addition, these data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. Indicate in the blank rows provided below any data you may have on pollutants not specifically listed in this form. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall number: DSN001 (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		

**METALS (TOTAL RECOVERABLE), CYANIDE, PHENOLS, AND HARDNESS.**

ANTIMONY	0.000	mg/l	0.000	lbs/day	0.000	mg/l	0.000	lbs/day	3	EPA 200.8	0.00100
ARSENIC	0.000580	mg/l	0.009	lbs/day	0.000193	mg/l	0.003	lbs/day	3	EPA 200.8	0.00050
BERYLLIUM	0.000	mg/l	0.000	lbs/day	0.000	mg/l	0.000	lbs/day	3	EPA 200.8	0.00100
CADMIUM	0.000	mg/l	0.000	lbs/day	0.000	mg/l	0.000	lbs/day	3	EPA 200.8	0.00100
CHROMIUM	0.000	mg/l	0.000	lbs/day	0.000	mg/l	0.000	lbs/day	3	EPA 200.8	0.00100
COPPER	0.00960	mg/l	0.130	lbs/day	0.00875	mg/l	0.107	lbs/day	3	EPA 200.8	0.00100
LEAD	0.000	mg/l	0.000	lbs/day	0.000	mg/l	0.000	lbs/day	3	EPA 200.8	0.00100
MERCURY	0.000000	mg/l	0.000	lbs/day	0.000000	mg/l	0.000	lbs/day	3	EPA 245.1	0.000200
NICKEL	0.00202	mg/l	0.032	lbs/day	0.00170	mg/l	0.022	lbs/day	3	EPA 200.8	0.00100
SELENIUM	0.000	mg/l	0.000	lbs/day	0.000	mg/l	0.000	lbs/day	3	EPA 200.8	0.00100
SILVER	0.000	mg/l	0.000	lbs/day	0.000	mg/l	0.000	lbs/day	3	EPA 200.8	0.00100
THALLIUM	0.000	mg/l	0.000	lbs/day	0.000	mg/l	0.000	lbs/day	3	EPA 200.8	0.00100
ZINC	0.0236	mg/l	0.360	lbs/day	0.0225	mg/l	0.278	lbs/day	3	EPA 200.8	0.00500
CYANIDE	0.007	mg/l	0.168	lbs/day	0.002	mg/l	0.056	lbs/day	3	ASTM D7511-09	0.00500
TOTAL PHENOLIC COMPOUNDS	0.0000	mg/l	0.000	lbs/day	0.0000	mg/l	0.000	lbs/day	3	EPA 420.1	0.0100
HARDNESS (AS CaCO3)	97.5	mg/l	1481	lbs/day	96.3	mg/l	1190.0	lbs/day	3	EPA 200.7	0.291

Use this space (or a separate sheet) to provide information on other metals requested by the permit writer.




FACILITY NAME AND PERMIT NUMBER:  
 Redstone Arsenal Central WWTP AL0062863

Outfall number: DSN001 (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE				ANALYTICAL METHOD	ML/MDL	
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units			Number of Samples
VOLATILE ORGANIC COMPOUNDS.											
ACROLEIN	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	5.0
ACRYLONITRILE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	5.0
BENZENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	3.0
BROMOFORM	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	3.0
CARBON TETRACHLORIDE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	3.0
CLOROBENZENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	3.0
CHLORODIBROMO-METHANE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	3.0
CHLOROETHANE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	5.0
2-CHLORO-ETHYLVINYL ETHER	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	3.0
CHLOROFORM	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	3.0
DICHLOROBROMO-METHANE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	3.0
1,1-DICHLOROETHANE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	3.0
1,2-DICHLOROETHANE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	3.0
TRANS-1,2-DICHLORO-ETHYLENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	3.0
1,1-DICHLOROETHYLENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	3.0
1,2-DICHLOROPROPANE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	3.0
1,3-DICHLORO-PROPYLENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	3.0
ETHYLBENZENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	3.0
METHYL BROMIDE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	5.0
METHYL CHLORIDE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	5.0
METHYLENE CHLORIDE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	5.0
1,1,2,2-TETRACHLORO-ETHANE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	3.0
TETRACHLORO-ETHYLENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	3.0
TOLUENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	3.0

**FACILITY NAME AND PERMIT NUMBER:**  
 Redstone Arsenal Central WWTP AL0062863

Outfall number: DSN001 (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE				ANALYTICAL METHOD	ML/ MDL	
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units			Number of Samples
1,1,1-TRICHLOROETHANE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	3.0
1,1,2-TRICHLOROETHANE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	3.0
TRICHLOROETHYLENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	3.0
VINYL CHLORIDE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	5.0

Use this space (or a separate sheet) to provide information on other volatile organic compounds requested by the permit writer.

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**ACID-EXTRACTABLE COMPOUNDS**

P-CHLORO-M-CRESOL	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	4.4
2-CHLOROPHENOL	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	3.3
2,4-DICHLOROPHENOL	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	3.3
2,4-DIMETHYLPHENOL	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	11
4,6-DINITRO-O-CRESOL	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	22
2,4-DINITROPHENOL	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	22
2-NITROPHENOL	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	4.4
4-NITROPHENOL	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	22
PENTACHLOROPHENOL	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	22
PHENOL	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	2.2
2,4,6-TRICHLOROPHENOL	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	4.4

Use this space (or a separate sheet) to provide information on other acid-extractable compounds requested by the permit writer.

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**BASE-NEUTRAL COMPOUNDS.**

ACENAPHTHENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	4.4
ACENAPHTHYLENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	5.5
ANTHRACENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	3.3
BENZIDINE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	33
BENZO(A)ANTHRACENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	3.3
BENZO(A)PYRENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	3.3

**FACILITY NAME AND PERMIT NUMBER:**  
 Redstone Arsenal Central WWTP AL0062863

Outfall number: DSN001 (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
3,4 BENZO-FLUORANTHENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	4.4
BENZO(GH)PERYLENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	4.4
BENZO(K)FLUORANTHENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	3.3
BIS (2-CHLOROETHOXY) METHANE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	3.3
BIS (2-CHLOROETHYL)-ETHER	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	4.4
BIS (2-CHLOROISO-PROPYL) ETHER	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	3.3
BIS (2-ETHYLHEXYL) PHTHALATE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	11
4-BROMOPHENYL PHENYL ETHER	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	4.4
BUTYL BENZYL PHTHALATE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	11
2-CHLORONAPHTHALENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	4.4
4-CHLORPHENYL PHENYL ETHER	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	3.3
CHRYSENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	3.3
DI-N-BUTYL PHTHALATE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	4.4
DI-N-OCTYL PHTHALATE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	6.6
DIBENZO(A,H) ANTHRACENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	5.5
1,2-DICHLOROBENZENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	3.0
1,3-DICHLOROBENZENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	3.0
1,4-DICHLOROBENZENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 624	3.0
3,3-DICHLOROBENZIDINE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	6.6
DIETHYL PHTHALATE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	5.5
DIMETHYL PHTHALATE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	4.4
2,4-DINITROTOLUENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	4.4
2,6-DINITROTOLUENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	3.3
1,2-DIPHENYLHYDRAZINE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	4.4

**FACILITY NAME AND PERMIT NUMBER:**  
 Redstone Arsenal Central WWTP AL0062863

Outfall number: DSN001 (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
FLUORANTHENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	3.3
FLUORENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	3.3
HEXACHLOROBENZENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	5.5
HEXACHLOROBUTADIENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	5.5
HEXACHLOROCYCLO- PENTADIENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	5.5
HEXACHLOROETHANE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	5.5
INDENO(1,2,3-CD)PYRENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	5.5
ISOPHORONE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	4.4
NAPHTHALENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	2.2
NITROBENZENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	6.6
N-NITROSODI-N-PROPYLAMINE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	3.3
N-NITROSODI- METHYLAMINE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	8.8
N-NITROSODI-PHENYLAMINE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	3.3
PHENANTHRENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	2.2
PYRENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	6.6
1,2,4-TRICHLOROBENZENE	0.0	ug/l	0.000	lbs/day	0.0	ug/l	0.000	lbs/day	3	EPA 625	3.3

Use this space (or a separate sheet) to provide information on other base-neutral compounds requested by the permit writer.

Use this space (or a separate sheet) to provide information on other pollutants (e.g., pesticides) requested by the permit writer.

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**END OF PART D.**  
**REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE**

**PDR Properties, Inc.**  
1029 Monarch Street, Suite 250  
P.O. Box 8131 – Zip 40533-8131  
Lexington, Kentucky 40513  
859.223.0425 Phone  
859.223.0459 Fax

**Alabama Department of Environmental Management  
Municipal Section – Water Division  
1400 Coliseum Blvd.  
Montgomery, AL 36110-2400**

**Attn: Stephanie Ammons**

**RE: Permit Renewal  
NPDES Permit No. AL0062863**

**Per our recent phone conversation enclosed are two copies of the appropriate permit application forms, as well as the necessary permit renewal fee.**

**Should you have any questions, or require additional information, please feel free to contact me at 859.223.0425.**

**Sincerely,**



**L. Marie Jacobs  
Corporate Office Manager**





Continued from the Front

**IV. Narrative Description of Pollutant Sources**

A. For each outfall, provide an estimate of the area (include units) of impervious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall.

Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)	Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)
002	1.11 Acres	2.11 Acres			
003	0 Acres	1.35 Acres			
004	0.59 Acres	2.30 Acres			

B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with storm water runoff; materials loading and access areas, and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall Number	Treatment	List Codes from Table 2F-1
002 003 004	No structural controls or treatment exists for DSN002, DSN003 and DSN004	N/A

**V. Nonstormwater Discharges**

A. I certify under penalty of law that the outfall(s) covered by this application have been tested or evaluated for the presence of nonstormwater discharges, and that all nonstormwater discharged from these outfall(s) are identified in either an accompanying Form 2C or Form 2E application for the outfall.

Name and Official Title (type or print)	Signature	Date Signed
Elbert C. Ray P.E., President		6/24/14

B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test.

Method used to evaluate the presence of non stormwater discharges include review of as-built drawings and visual observation during dry weather.

**VI. Significant Leaks or Spills**

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

There have been no leaks or spills of toxic or hazardous pollutants at this facility.

**VII. Discharge Information**

A, B, C, & D: See instructions before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided.  
Table VII-A, VII-B, VII-C are included on separate sheets numbers VII-1 and VII-2.

E. Potential discharges not covered by analysis – is any toxic pollutant listed in table 2F-2, 2F-3, or 2F-4, a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

Yes (list all such pollutants below)

No (go to Section IX)

**VIII. Biological Toxicity Testing Data**

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

Yes (list all such pollutants below)

No (go to Section IX)

**IX. Contract Analysis Information**

Were any of the analyses reported in Item VII performed by a contract laboratory or consulting firm?

Yes (list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)

No (go to Section X)

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed

**X. Certification**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name & Official Title (Type Or Print) Elbert C. Ray, P.E. President	B. Area Code and Phone No. (859) 223-0425
C. Signature 	D. Date Signed 6/24/14













**SUPPLEMENTARY INFORMATION**  
**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)**  
**PERMIT APPLICATION FORM 188- Municipal, Semi-Public & Private Facilities**

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
WATER DIVISION – MUNICIPAL PERMIT SECTION  
POST OFFICE BOX 301463  
MONTGOMERY, ALABAMA 36130-1463

**INSTRUCTIONS:** APPLICATIONS SHOULD BE TYPED OR PRINTED IN INK AND SUBMITTED TO THE DEPARTMENT. PLEASE CONTINUE ON AN ATTACHED SHEET OF PAPER IF INSUFFICIENT SPACE IS AVAILABLE TO ADDRESS ANY ITEM BELOW. PLEASE MARK N/A IN THE APPROPRIATE BOX WHEN AN ITEM IS NON-APPLICABLE TO THE APPLICANT.

**PURPOSE OF THIS APPLICATION**

- |  |   |
|--|---|
| <input type="checkbox"/> INITIAL PERMIT APPLICATION FOR NEW FACILITY | <input type="checkbox"/> INITIAL PERMIT APPLICATION FOR EXISTING FACILITY |
| <input type="checkbox"/> MODIFICATION OF EXISTING PERMIT             | <input checked="" type="checkbox"/> REISSUANCE OF EXISTING PERMIT         |
| <input type="checkbox"/> REVOCATION & REISSUANCE OF EXISTING PERMIT  |   |

**SECTION A – GENERAL INFORMATION**

1. Facility Name: Redstone Arsenal Central WWTP
- a. Operator Name: PDR Properties, Inc.
- b. Is the operator identified in 1.a, the owner of the facility?      Yes       No   
If no, provide name and address of the operator and submit information indicating the operator's scope of responsibility for the facility.
- c. Name of Permittee\* if different than Operator: \_\_\_\_\_  
*\*Permittee will be responsible for compliance with the conditions of the permit*
2. NPDES Permit Number AL 0062863 (Not applicable if initial permit application)
3. Facility Location: (**Attach a map with location marked; street, route no. or other specific identifier**)  
Street: 8007 Buxton Road  
City: Redstone Arsenal      County: Madison      State: Alabama      Zip: 35898  
Facility (Front Gate) Location: Latitude (Deg Min Sec): 34.5901      Longitude (Deg. Min Sec): 86.6643
4. Facility Mailing Address (Street or Post Office Box): P.O. Box 8131  
City: Lexington      County: Fayette      State: Kentucky      Zip: 40533-8131
5. Responsible Official (as described on page 7 of this application):  
Name and Title: Elbert C. Ray - President  
Address: 1029 Monarch Street, Suite 250  
City: Lexington      State: Kentucky      Zip: 40513  
Phone Number: 859.223.0425  
Email Address: (Optional): \_\_\_\_\_

6. Designated Facility/DMR Contact:

Name and Title: Bryce McCreless - Plant Operator

Phone Number: 256.650.5605

DMR Email Address (Optional – for receipt of blank DMR Forms): mjacobs@rayconsultantsllc.com

7. Please complete this section if the Applicant's business entity is a Proprietorship or limited liability Corporation with a responsible official not listed in Item 5.

a) Proprietor:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

8. Permit numbers for Applicant's previously issued NPDES Permits and identification of any other State Environmental Permits presently held by the Applicant within the State of Alabama:

<u>Permit Name</u>	<u>Permit Number</u>	<u>Held by</u>
NPDES _____	AL0062863	PDR Properties, Inc. _____
_____	002,003,004	_____
_____	_____	_____
_____	_____	_____

9. Identify all Administrative Complaints, Notices of Violation, Directives, or Administrative Orders, Consent Decrees, or Litigation concerning water pollution or other permit violations, if any against the Applicant within the State of Alabama in the past five years (attach additional sheets if necessary):

<u>Facility Name</u>	<u>Permit Number</u>	<u>Type of Action</u>	<u>Date of Action</u>
N/A _____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

**SECTION B – WASTEWATER DISCHARGE INFORMATION**

1. List the following historical monthly flow rates recorded for the past five years for each outfall:

<u>Outfall Number</u>	<u>Highest in Last 12 Months MGD</u>	<u>Highest Daily Flow MGD</u>	<u>Average Flow MGD</u>
0001 _____	7.37 _____	7.37 _____	1.88 _____
_____	_____	_____	_____

2. Report E-coli (Freshwater) or Enterococci (Coastal Waters) monitoring results for the past five years for each outfall if available:

Outfall Number	Ecoli or Enterococci	Maximum Daily E-coli / Enterococci Discharge (per 100 ml)	Maximum Monthly Average Discharge E-Coli / Enterococci (per 100 ml)	No. of Analyses	Analytical Method	ML/MDL
N/A						

3. Attached a process flow schematic of the treatment process, including the size of each unit operation.

4. Do you have, or plan to have, automatic sampling equipment or continuous wastewater flow metering equipment at this facility?

Current:	Flow Metering	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
	Sampling Equipment	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Planned:	Flow Metering	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
	Sampling Equipment	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>

If so, please attach a schematic diagram of the sewer system indicating the present or future location of this equipment and describe the equipment below:

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5. Are any wastewater collection or treatment modifications or expansions planned during the next three years that could alter wastewater volumes or characteristics (Note: Permit Modification may be required)? Yes  No

Briefly describe these changes and any potential or anticipated effects on the wastewater quality and quantity: (Attach additional sheets if needed.)

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**SECTION C – WASTE STORAGE AND DISPOSAL INFORMATION**

Describe the location of all sites used for the storage of solids or liquids that have any potential for accidental discharge to a water of the state, either directly or indirectly via storm sewer, municipal sewer, municipal wastewater treatment plants, or other collection or distribution systems that are located at or operated by the subject existing or proposed NPDES-permitted facility. Indicate the location of any potential release areas and provide a map or detailed narrative description of the areas of concern as an attachment to this application:

Description of Waste	Description of Storage Location
N/A	

Describe the location of any sites used for the ultimate disposal of solid or liquid waste materials or residuals (e.g. sludges) generated by any wastewater treatment system located at the facility.

Description of Waste	Quantity (lbs/day)	Disposal Method*
N/A		

\*Indicate any wastes disposed at an off-site treatment facility and any wastes that are disposed on-site

**SECTION D – INDUSTRIAL INDIRECT DISCHARGE CONTRIBUTORS**

1. List the existing and proposed industrial source wastewater contributions to the municipal wastewater treatment system (Attach other sheets if necessary)

Company Name	Description of Industrial Wastewater	Existing or Proposed	Flow (MGD)	Subject to SID Permit? Y/N
NASA	Prep of classified equipment	Existing	0.0450	SID-IU084500027
ISP	Amonia & Steam to process iron powder	Existing	.001	SID-IU084500028

2. Are industrial wastewater contributions regulated via a locally approved sewer use ordinance  Y/ N? If so, please attach a copy of the ordinance.

**SECTION E – COASTAL ZONE INFORMATION**

Is the discharge(s) located within the 10-foot elevation contour and within the limits of Mobile or Baldwin County?  
 Yes  No  If yes, then complete items A through M below:

	YES	NO
A. Does the project require new construction?	<input type="checkbox"/>	<input type="checkbox"/>
B. Will the project be a source of new air emissions?	<input type="checkbox"/>	<input type="checkbox"/>
C. Does the project involve dredging and/or filling of a wetland area or water way?	<input type="checkbox"/>	<input type="checkbox"/>
Has the Corps of Engineers (COE) permit been issued?	<input type="checkbox"/>	<input type="checkbox"/>
Corps Project Number _____		
D. Does the project involve wetlands and/or submersed grassbeds?	<input type="checkbox"/>	<input type="checkbox"/>
E. Are oyster reefs located near the project site? (Include a map showing project and discharge location with respect to oyster reefs)	<input type="checkbox"/>	<input type="checkbox"/>
F. Does the project involve the site development, construction and operation of an energy facility as defined in ADEM Admin. Code R. 335-8-1-.02(bb)?	<input type="checkbox"/>	<input type="checkbox"/>
G. Does the project involve mitigation of shoreline or coastal area erosion?	<input type="checkbox"/>	<input type="checkbox"/>
H. Does the project involve construction on beaches or dunes areas?	<input type="checkbox"/>	<input type="checkbox"/>
I. Will the project interfere with public access to coastal waters?	<input type="checkbox"/>	<input type="checkbox"/>
J. Does the project lie within the 100-year floodplain?	<input type="checkbox"/>	<input type="checkbox"/>
K. Does the project involve the registration, sale, use, or application of pesticides?	<input type="checkbox"/>	<input type="checkbox"/>
L. Does the project propose or require construction of a new well or to alter an existing groundwater well to pump more than 50 gallons per day (GPD)?	<input type="checkbox"/>	<input type="checkbox"/>
M. Has the applicable permit for groundwater recovery or for groundwater well installation been obtained?	<input type="checkbox"/>	<input type="checkbox"/>

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**SECTION F – ANTI-DEGRADATION EVALUATION**

It is the applicant's responsibility to demonstrate the social and economic importance of the proposed activity, if subject to antidegradation requirements. In accordance with 40 CFR 131.12 and Section 335-6-10-.04 of the Alabama Department of Environmental Management Administrative Code, the following information must be provided, if applicable. If further information is required to make this demonstration, attach additional sheets to the application.

1. Is this a new or increased discharge that began after April 3, 1991? Yes  No .  
If "yes", complete question 2 below. If "no", do not complete this section.

2. Has an Anti-Degradation Analysis been previously conducted and submitted to the Department for the new or increased discharge referenced in question 1? Yes  No .

If "no" and the discharge is to a Tier II waterbody as defined in ADEM Admin. Code r. 335-6-10-.12(4), complete questions A through F below and also ADEM forms 311 and 312 or 313, whichever is applicable, (attached). Form 312 or 313, whichever is applicable, must be provided for each treatment discharge alternative considered technically viable. If "yes", do not complete this section.

Information required for new or increased discharges to high quality waters:

- A. What environmental or public health problem will the discharger be correcting?
- B. Explain if and to what degree the discharger will be increasing employment as a result of the proposed discharge, either at its existing facility or as the result of the start-up of a related new facility or industry.
- C. Explain if and to what degree the discharge will prevent employment reductions?
- D. Describe any additional state or local taxes that the prospective discharger will be paying.
- E. Describe any public service the discharger will be providing to the community.
- F. Describe the economic or social benefit the discharger will be providing to the community.

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**SECTION G – EPA Application Forms**

All Applicants must submit certain EPA permit application forms. More than one application form may be required from a municipal facility depending on the number and types of discharges or outfalls. The EPA application forms are found on the Department's website at <http://www.adem.state.al.us/> and are also listed in Attachment 4.

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**SECTION H– ENGINEERING REPORT/BMP PLAN REQUIREMENTS**

Any Engineering Report or Best Management Practice (BMP) Plans required to be submitted to ADEM by the applicant must be in accordance with ADEM 335-6-6-.08(i) & (j).

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**SECTION I– RECEIVING WATERS**

Receiving Water(s)	303(d) Segment? (Y / N)	Included in TMDL?* (Y / N)
Tennessee River		

\*If a TMDL Compliance Schedule is requested the following should be attached as supporting documentation:

- (1) Justification for the proposed Compliance Schedule (e.g. time for design and installation of control equipment, etc.);
- (2) Monitoring results for the pollutant(s) of concern which have not previously been submitted to the Department (sample collection dates, analytical results (mass and concentration), methods utilized, MDL/ML, etc. should be reported as available);
- (3) Requested interim limitations, if applicable;
- (4) Date of final compliance with the TMDL limitations; and
- (5) Any other additional information available to support the requested compliance schedule.

**SECTION J – APPLICATION CERTIFICATION**

THE INFORMATION CONTAINED IN THIS FORM MUST BE CERTIFIED BY A RESPONSIBLE OFFICIAL AS DEFINED IN ADEM ADMINISTRATIVE RULE 335-6-6-.09 "SIGNATORY REQUIREMENTS FOR PERMIT APPLICATIONS" (SEE BELOW).

"I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS."

"I FURTHER CERTIFY UNDER PENALTY OF LAW THAT THE RESULTS OF ANY ANALYSES REPORTED AS LESS THAN DETECTABLE IN THIS APPLICATION OR IN ATTACHMENTS THERETO WERE PERFORMED USING THE EPA APPROVED TEST METHOD HAVING THE LOWEST DETECTION LIMIT READILY ACHIEVABLE FOR THE SUBSTANCE TESTED."

SIGNATURE OF RESPONSIBLE OFFICIAL: Elbert C. Ray DATE SIGNED: 6/27/14

(TYPE OR PRINT) Elbert C. Ray

NAME OF RESPONSIBLE OFFICIAL: Elbert C. Ray

OFFICIAL TITLE OF RESPONSIBLE OFFICIAL: President

MAILING ADDRESS: P.O. Box 8131, Lexington, KY 40533-8131

AREA CODE & PHONE NUMBER: 859.223.0425

**SIGNATORY REQUIREMENTS FOR PERMIT APPLICATIONS**

Responsible official is defined as follows:

1. In the case of a corporation, by a principal executive officer of at least the level of vice president, or a manager assigned or delegated in accordance with corporate procedures, with such delegation submitted in writing if required by the Department, who is responsible for manufacturing, production, or operating facilities and is authorized to make management decisions which govern the operation of the regulated facility
2. In the case of a partnership, by a general partner
3. In the case of a sole proprietorship, by the proprietor, or
4. In the case of a municipal, state, federal, or other public facility, by either a principal executive officer, or a ranking elected official.
5. In the case of a private or semi-public facility, the responsible official is either a principal executive officer or the owner of the corporation or other entity.



# Attachment 2 to Supplementary Form

## Calculation of Total Annualized Project Costs for Public-Sector Projects

### A. Capital Costs

Capital Cost of Project

\$ N/A

Other One-Time Costs of Project (Please List, if any):

\$ \_\_\_\_\_

\$ \_\_\_\_\_

\$ \_\_\_\_\_

**Total Capital Costs (Sum column)**

\$ \_\_\_\_\_ (1)

Portion of Capital Costs to be Paid for with Grant Monies

\$ \_\_\_\_\_ (2)

Capital Costs to be Financed [Calculate: (1) – (2) ]

\$ \_\_\_\_\_ (3)

Type of Financing (e.g., G.O. bond, revenue bond, bank loan)

\_\_\_\_\_

Interest Rate for Financing (expressed as decimal)

\_\_\_\_\_ (i)

Time Period of Financing (in years)

\_\_\_\_\_ (n)

Annualization Factor =  $\frac{i}{(1+i)^n - 1} + i$

\_\_\_\_\_ (4)

**Annualized Capital Cost** [Calculate: (3) x (4) ]

\_\_\_\_\_ (5)

### B. Operating and Maintenance Costs

Annual Costs of Operation and Maintenance (including but not limited to: monitoring, inspection, permitting fees, waste disposal charges, repair, administration and replacement.) (Please list below.)

\$ \_\_\_\_\_

\$ \_\_\_\_\_

\$ \_\_\_\_\_

\$ \_\_\_\_\_

**Total Annual O & M Costs (Sum column)**

\$ \_\_\_\_\_ (6)

### C. Total Annual Cost of Pollution Control Project

Total Annual Cost of Pollution Control Project [ (5) + (6) ]

\$ \_\_\_\_\_ (7)



## Attachment 4 to Supplementary Form

### NPDES PROGRAM PERMIT APPLICATION FORMS ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

TYPE DISCHARGE	ADEM FORMS	EPA FORMS
New or existing once through non-contact cooling water and/or cooling tower blowdown, and/or sanitary wastewater (non-process wastewater only). Note: POTWs and privately owned domestic treatment works should use Form 2A.	Supplemental Information Form 187 – (Industrial) or Form 188 (Municipal)	Forms 1 and 2E
Existing discharges of process wastewater	Supplemental Information Form 187 – (Industrial) or Form 188 (Municipal)	Forms 1 and 2C
New discharges of process wastewater	Supplemental Information Form 187 – (Industrial) or Form 188 (Municipal)	Forms 1 and 2D
New or existing discharges composed entirely of stormwater meeting the EPA definition of stormwater associated with industrial activity	Supplemental Information Form 187 – (Industrial) or Form 188 (Municipal)	Forms 1 and 2F
New or existing discharges composed of stormwater meeting the EPA definition of stormwater associated with industrial activity, and any other non-stormwater discharges.	Supplemental Information Form 187 – (Industrial) or Form 188 (Municipal)	Forms 1 and 2F and, as appropriate, Forms 2E, 2E, 2C, and/or 2D
New or existing Publicly-Owned Treatment Works (POTWs) and Privately-Owned Treatment Works composed of sanitary wastewater	Supplemental Information Form 187 – (Industrial) or Form 188 (Municipal)	Forms 1 and 2A
New or existing land application of process wastewater. Form 2F is required for stormwater runoff from the land application site, if the site is not completely bermed to prevent runoff.	Supplemental Information Form 187 – (Industrial)	Forms 1, 2F, and 2C or 2D, as appropriate
New or existing land application of sanitary wastewater. Form 2F is required for stormwater runoff from the land application site, if the site is not completely bermed to prevent runoff.	Supplemental Information Form 187 – (Industrial) or Form 188 (Municipal)	Forms 1, 2A, and 2F

Testing requirements: Test procedures for all analyses shall conform to 40 CFR Part 136 or an alternate method specifically approved by the Department. If more than one method of analysis is approved, then the method having the lowest detection level shall be used.



CONTINUED FROM THE FRONT

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?  
 YES (complete the following table)  NO (go to Section III)

1. OUTFALL NUMBER (list)	2. OPERATION(S) CONTRIBUTING FLOW (list)	3. FREQUENCY		4. FLOW				C. DURATION (in days)
		a. DAYS PER WEEK (specify average)	b. MONTHS PER YEAR (specify average)	a. FLOW RATE (in mgd)		B. TOTAL VOLUME (specify with units)		
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	1. LONG TERM AVERAGE	2. MAXIMUM DAILY	

**III. PRODUCTION**

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?  
 YES (complete Item III-B)  NO (go to Section IV)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (or other measure of operation)?  
 YES (complete Item III-C)  NO (go to Section IV)

C. If you answered "yes" to Item III-B, list the quantity which represents an actual measurement of your level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. AVERAGE DAILY PRODUCTION			2. AFFECTED OUTFALLS (list outfall numbers)
a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. (specify)	

**IV. IMPROVEMENTS**

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operations of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.  
 YES (complete the following table)  NO (go to Item IV-B)

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
	a. NO.	b. SOURCE OF DISCHARGE		a. REQUIRED	b. PROJECTED

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (or other environmental projects which may affect your discharges) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction.  
 MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED

EPA I.D. NUMBER (copy from Item 1 of Form 1)  
AL0062863

CONTINUED FROM PAGE 2

**V. INTAKE AND EFFLUENT CHARACTERISTICS**

A, B, & C: See instructions before proceeding – Complete one set of tables for each outfall – Annotate the outfall number in the space provided.  
NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-9.

D. Use the space below to list any of the pollutants listed in Table 2c-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
None			

**VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS**

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

YES (list all such pollutants below )

NO (go to Item VI-B)

CONTINUED FROM THE FRONT

**VII. BIOLOGICAL TOXICITY TESTING DATA**

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

YES (identify the test(s) and describe their purposes below)

NO (go to Section VIII)

Annual acute toxicity testing as per current permit requirements.

**VIII. CONTRACT ANALYSIS INFORMATION**

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

YES (list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)

NO (go to Section IX)

A. NAME	B. ADDRESS	C. TELEPHONE (area code & no.)	D. POLLUTANTS ANALYZED (list)
Enersolv	2220 Beltline Road SW Decatur, AL 35601	256.350.0846	PH Final, TSS Influent & Effluent, Nitrogen Ammonia Total (As N) effluent, Nitrogen Kjeldahl Total (As N)effluent, Nitrite Plus Nitrate Total 1Det (As N) Effluent, Phosphorus total (As P) effluent, Chlorine Total Residual, Coliform Fecal General, Bod Carbonaceous Influent, BOD Carbonaceous Effluent, BOD-Removal, Solids Suspended % Removal

**IX. CERTIFICATION**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. NAME & OFFICIAL TITLE (type or print) Elbert C. Ray, P.E., President	B. PHONE NO. (area code & no.) (859) 223-0425
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C. SIGNATURE <i>Elbert C Ray P.E.</i>	D. DATE SIGNED <i>6/24/14</i>
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PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER (copy from Item 1 of Form 1)  
AL 0062863

OUTFALL NO.  
001

V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)	4. INTAKE (optional)					
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)			d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS					(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (BOD)	N/A												
b. Chemical Oxygen Demand (COD)													
c. Total Organic Carbon (TOC)													
d. Total Suspended Solids (TSS)													
e. Ammonia (as N)													
f. Flow	VALUE		VALUE		VALUE					VALUE			
g. Temperature (winter)	VALUE		VALUE		VALUE			°C		VALUE			
h. Temperature (summer)	VALUE		VALUE		VALUE			°C		VALUE			
i. pH	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM				STANDARD UNITS					

PART B - Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS	5. INTAKE (optional)					
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)			d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS					(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)		X													
b. Chlorine, Total Residual		X													
c. Color		X													
d. Fecal Coliform	X		col./100ML	3300	col/100 ML	77	N/A	N/A	104						
e. Fluoride (16984-48-8)		X													
f. Nitrate-Nitrite (as N)	X		MG/L	22.60	MG/L	22.60	N/A	N/A	12						

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (as N)	X		MG/L	1.00			MG/L	0.31						
h. Oil and Grease		X												
i. Phosphorus (as P), Total (7723-14-0)	X		MG/L	9.98			MG/L	3.34						
j. Radioactivity														
(1) Alpha, Total		X												
(2) Beta, Total		X												
(3) Radium, Total		X												
(4) Radium 226, Total		X												
k. Sulfate (as SO <sub>4</sub> ) (14806-79-8)		X												
l. Sulfide (as S)		X												
m. Sulfite (as SO <sub>3</sub> ) (14265-45-3)		X												
n. Surfactants		X												
o. Aluminum, Total (7429-90-5)		X												
p. Barium, Total (7440-39-3)		X												
q. Boron, Total (7440-42-8)		X												
r. Cobalt, Total (7440-48-4)		X												
s. Iron, Total (7439-89-6)		X												
t. Magnesium, Total (7439-95-4)		X												
u. Molybdenum, Total (7439-98-7)		X												
v. Manganese, Total (7439-96-5)		X												
w. Tin, Total (7440-31-5)		X												
x. Titanium, Total (7440-32-6)		X												

EPA I.D. NUMBER (copy from Item 1 of Form 1)	OUTFALL NUMBER
AL0062863	001

CONTINUED FROM PAGE 3 OF FORM 2-C

**PART C -** If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (all 7 pages) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
<b>METALS, CYANIDE, AND TOTAL PHENOLS</b>															
1M. Antimony, Total (7440-36-0)			X												
2M. Arsenic, Total (7440-38-2)			X												
3M. Beryllium, Total (7440-41-7)			X												
4M. Cadmium, Total (7440-43-9)			X												
5M. Chromium, Total (7440-47-3)			X												
6M. Copper, Total (7440-50-8)			X												
7M. Lead, Total (7439-92-1)			X												
8M. Mercury, Total (7439-97-6)			X												
9M. Nickel, Total (7440-02-0)			X												
10M. Selenium, Total (7782-49-2)			X												
11M. Silver, Total (7440-22-4)			X												
12M. Thallium, Total (7440-28-0)			X												
13M. Zinc, Total (7440-66-6)			X												
14M. Cyanide, Total (57-12-5)			X												
15M. Phenols, Total			X												
<b>DIOXIN</b>															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)			X												
2V. Acrylonitrile (107-13-1)			X												
3V. Benzene (71-43-2)			X												
4V. Bis (Chloro- methyl) Ether (542-88-1)			X												
5V. Bromoform (75-25-2)			X												
6V. Carbon Tetrachloride (56-23-5)			X												
7V. Chlorobenzene (108-90-7)			X												
8V. Chloro- bromomethane (124-48-1)			X												
9V. Chloroethane (75-00-3)			X												
10V. 2-Chloro- ethylvinyl Ether (110-75-8)			X												
11V. Chloroform (67-65-3)			X												
12V. Dichloro- bromomethane (75-27-4)			X												
13V. Dichloro- difluoromethane (75-71-8)			X												
14V. 1,1-Dichloro- ethane (75-34-3)			X												
15V. 1,2-Dichloro- ethane (107-06-2)			X												
16V. 1,1-Dichloro- ethylene (75-35-4)			X												
17V. 1,2-Dichloro- propane (78-87-5)			X												
18V. 1,3-Dichloro- propylene (542-75-6)			X												
19V. Ethylbenzene (100-41-4)			X												
20V. Methyl Bromide (74-83-9)			X												
21V. Methyl Chloride (74-87-3)			X												

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)															
22V. Methylene Chloride (75-09-2)			X												
23V. 1,1,2,2-Tetrachloroethane (79-34-5)			X												
24V. Tetrachloroethylene (127-18-4)			X												
25V. Toluene (108-88-3)			X												
26V. 1,2-Trans-Dichloroethylene (156-60-5)			X												
27V. 1,1,1-Trichloroethane (71-55-6)			X												
28V. 1,1,2-Trichloroethane (79-00-5)			X												
29V. Trichloroethylene (79-01-6)			X												
30V. Trichlorofluoromethane (75-69-4)			X												
31V. Vinyl Chloride (75-01-4)			X												
GC/MS FRACTION - ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)			X												
2A. 2,4-Dichlorophenol (120-83-2)			X												
3A. 2,4-Dimethylphenol (105-67-9)			X												
4A. 4,6-Dinitro-O-Cresol (534-52-1)			X												
5A. 2,4-Dinitrophenol (51-28-5)			X												
6A. 2-Nitrophenol (88-75-5)			X												
7A. 4-Nitrophenol (100-02-7)			X												
8A. P-Chloro-M-Cresol (59-50-7)			X												
9A. Pentachlorophenol (87-86-5)			X												
10A. Phenol (108-95-2)			X												
11A. 2,4,6-Trichlorophenol (88-05-2)			X												

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)			X												
2B. Acenaphthylene (208-96-8)			X												
3B. Anthracene (120-12-7)			X												
4B. Benzidine (92-87-5)			X												
5B. Benzo (a) Anthracene (56-55-3)			X												
6B. Benzo (a) Pyrene (50-32-8)			X												
7B. 3,4-Benzo-fluoranthene (205-99-2)			X												
8B. Benzo (ghi) Perylene (191-24-2)			X												
9B. Benzo (k) Fluoranthene (207-08-9)			X												
10B. Bis (2-Chloroethoxy) Methane (111-91-1)			X												
11B. Bis (2-Chloroethyl) Ether (111-44-4)			X												
12B. Bis (2-Chloroisopropyl) Ether (102-80-1)			X												
13B. Bis (2-Ethylhexyl) Phthalate (117-81-7)			X												
14B. 4-Bromophenyl Phenyl Ether (101-55-3)			X												
15B. Butyl Benzyl Phthalate (85-68-7)			X												
16B. 2-Chloronaphthalene (91-58-7)			X												
17B. 4-Chlorophenyl Phenyl Ether (7005-72-3)			X												
18B. Chrysene (218-01-9)			X												
19B. Dibenz (a,h) Anthracene (53-70-3)			X												
20B. 1,2-Dichlorobenzene (95-50-1)			X												
21B. 1,3-Dichlorobenzene (541-73-1)			X												

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT								4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES		
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS			
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)																	
22B. 1,4-Dichloro- benzene (106-46-7)			X														
23B. 3,3-Dichloro- benzidine (91-94-1)			X														
24B. Diethyl Phthalate (84-66-2)			X														
25B. Dimethyl Phthalate (131-11-3)			X														
26B. Di-N-Butyl Phthalate (84-74-2)			X														
27B. 2,4-Dinitro- toluene (121-14-2)			X														
28B. 2,6-Dinitro- toluene (506-20-2)			X														
29B. Di-N-Octyl Phthalate (117-84-0)			X														
30B. 1,2-Diphenyl- hydrazine (as Azo- benzene) (122-66-7)			X														
31B. Fluoranthene (206-44-0)			X														
32B. Fluorene (86-73-7)			X														
33B. Hexachloro- benzene (118-74-1)			X														
34B. Hexachloro- butadiene (87-68-3)			X														
35B. Hexachloro- cyclopentadiene (77-47-4)			X														
36B Hexachloro- ethane (67-72-1)			X														
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)			X														
38B. Isophorone (78-59-1)			X														
39B. Naphthalene (91-20-3)			X														
40B. Nitrobenzene (98-95-3)			X														
41B. N-Nitro- sodimethylamine (62-75-9)			X														
42B. N-Nitroso- di- N-Propylamine (621-64-7)			X														

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						d. NO. OF ANALYSES	4. UNITS		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)			a. CONCEN- TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)															
43B. N-Nitrosodiphenylamine (86-30-6)			X												
44B. Phenanthrene (85-01-8)			X												
45B. Pyrene (129-00-0)			X												
46B. 1,2,4-Trichlorobenzene (120-82-1)			X												
GC/MS FRACTION - PESTICIDES															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'-DDT (50-29-3)			X												
8P. 4,4'-DDE (72-55-9)			X												
9P. 4,4'-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Endosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

EPA I.D. NUMBER (copy from Item 1 of Form 1)	OUTFALL NUMBER
AL 0062863	001

CONTINUED FROM PAGE V-8

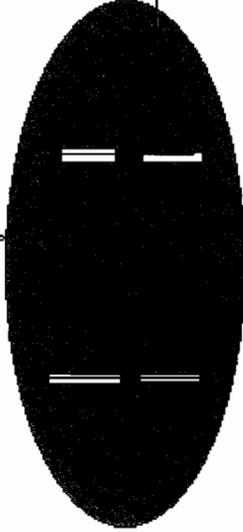
1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - PESTICIDES (continued)															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X												
19P. PCB-1254 (11097-69-1)			X												
20P. PCB-1221 (11104-28-2)			X												
21P. PCB-1232 (11141-16-5)			X												
22P. PCB-1248 (12672-29-6)			X												
23P. PCB-1260 (11096-82-5)			X												
24P. PCB-1016 (12674-11-2)			X												
25P. Toxaphene (8001-35-2)			X												

24" Force Main from Redstone Arsenal

Influent Doppler Flow Meter

Influent pump station, 3 Flygt submersible pumps @ 3 MGD each

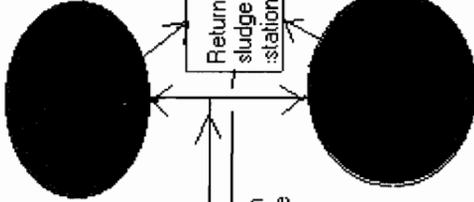
Mechanical Bar Screen



Lakeside Oxidation Ditch  
4 25HP Brush Aerators  
3 operating, 1 standby  
24 hr detention at design flow

Return Sludge

Return & waste sludge pump station



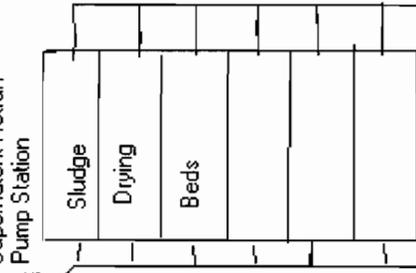
2 Circular clarifiers  
1 operating, 1 standby  
Peak flow capacity 9MGD

Standby Generator, UV System only

Ultraviolet Disinfection 3 units @ 3MGD each

Parshall Flume & Effluent flow measuring

Supernatant Return Pump Station



Sludge

Drying

Beds

Operations Building  
Laboratory  
Control Rm  
Office  
Shop  
Shower

Standby Generator Total Plant



Aerated sludge holding and thickening

To Outfall

To Influent

Chain Link Fence

Plant Boundary Seven-Acre Site  
Leased by PDR PROPERTIES INC.

CENTRAL WASTEWATER TREATMENT PLANT  
REDSTONE ARSENAL  
OWNED AND OPERATED BY PDR PROPERTIES INC.